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THE OPHTHALMIC RECORD

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The January number of the OPHTHALMIC RECORD will contain, among others, an original communication by Geo. E. de Schweinitz, M. D., on a "Peculiar Vascular Growth in the Vitreous", with colored frontispiece; one by G. C. Savage, M. D., on "Three Facts and two Theories as to the Law of Direction"; one by Arthur J. Shaw, M. D., "Spontaneous Hemorrhage into theOrbit"; one by H. McI. Morton, M. D., "A Nystagmic Family", etc.

There will also appear reviews of the most recent contributions to Ophthalmology published here and abroad, editorials by prominent Ophthalmologists, society reports and miscellaneous items of interest.

The RECORD particularly desires short, practical papers on any subject connected with Ophthalmology. These will be published at as early a date as possible. It is understood that, unless otherwise arranged, original articles when accepted are contributed to the RECORD exclusively. Illustrative cuts will be made at the expense of the journal and proofs for correction will be sent to authors when desired. Reprints with covers are furnished at cost. One hundred of these will be furnished to authors *gratis* when a request for them is written on the original manuscript. The RECORD will be issued monthly and each number will contain about 54 pages of reading matter.

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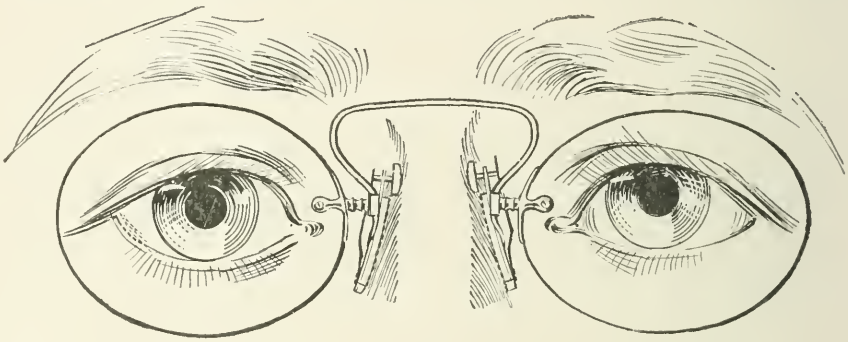

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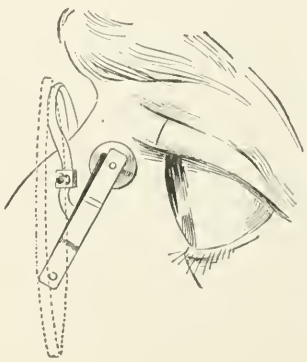

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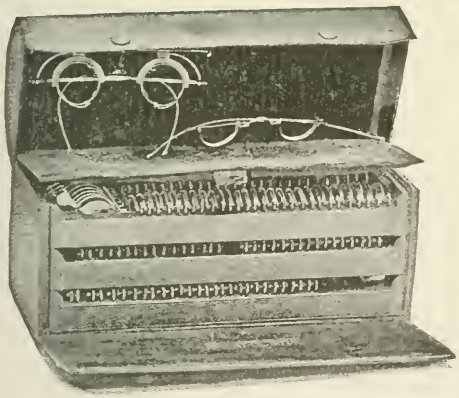

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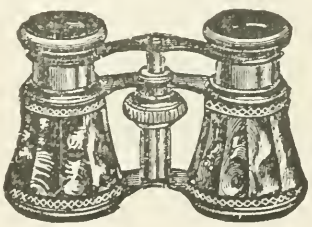

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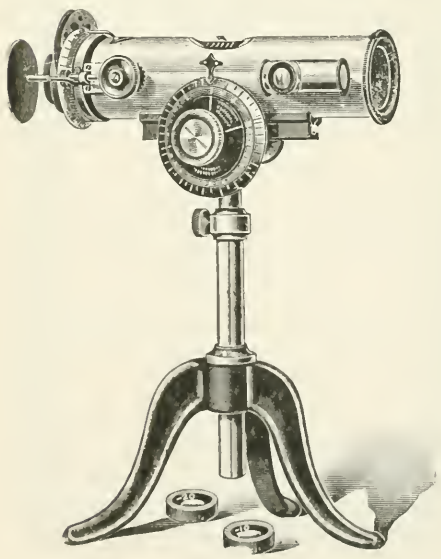

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THE
OPHTHALMIC RECORD

A Monthly Review of the Progress of Ophthalmology.

VOL VI. CHICAGO, DECEMBER. 1897. No. 12, NEW SERIES.

ORIGINAL ARTICLES.

PANOPHTHALMITIS AND MENINGITIS ACCOMPANYING LA GRIPPE.*

By C. D. CONKEY, M. D.
West Superior, Wis.

Interesting as is the subject of acute inflammatory processes arising in the cranium and in the deeper tissues of the eye simultaneously or consecutively it is not my purpose to enter extensively into its discussion. It is my aim simply to describe the usual sources of infection, the channels through which it travels to reach the organs involved and finally to relate the history of a violent attack involving both structures whose chief interest consists in the very unusual apparent source of infection. Most writers agree that acute meningitis is always due to an infective process reaching the cerebral membranes usually directly from without but sometimes through the blood. Chronic suppurative middle ear disease with caries, mastoid disease, disease of the nasal sinuses and diseases of the orbit and injuries to the bones of the head are the common sources of infection from without, while from the common infectious diseases such as pyaemia, pneumonia, variola, scarlet fever, rheumatism, measles, typhoid fever and mumps is conveyed the septic material through the blood to the brain. Suppurative choroiditis is developed by causes not at all unlike those producing inflammation of the meninges, and spring from sources external to the body or through direct infection of the blood. When arising from without, the eye must have suffered from some injury or disease involving its outer coats such as perforating wounds, corneal abrasions, cicatricial tissue with entanglement of the iris, etc. When arising from within it may

*Read before Wisconsin State Medical Society.

be due to septic emboli becoming fixed in the vessels of the choroid which spring from a suppurating centre (Fuchs) such as pyaemia, from a suppurating ear or sinus, (2) by the extension of inflammation from a phlegmon in the orbit, and (3) by the transfer of the inflammatory process from the meninges along the course of the optic nerve to the eye during an attack of acute meningitis

The great majority of cases seen spring from causes external to the body. As the eye is subject to injury with great frequency it is not surprising that septic infection of the choroid is by no means uncommon. As abscess of the orbit is itself uncommon, the cases arising from this cause are very few. Meningitis quite frequently causes an inflammatory process in the choroid, but the cases springing from this cause are as a rule of a mild type seldom injuring the shape of the eye ball and not always completely destroying the sight of the affected eye. This class of cases is almost entirely confined to childhood. Those cases springing from septic emboli are very few indeed and occur in the course of pyaemia, scarlet fever, typhus, erysipelas, malignant anthrax and ulcerative endocarditis. Fuchs mentions influenza also as a cause of this disease. I have searched the literature of this strange disease since its advent into our midst in 1889 and while I find that the eye has suffered as much as any single organ, I can find no reference to suppurative choroiditis as one of its complications. While the history of the case given below is not as clear as I should have liked, antedating my first visit, upon which to base a diagnosis, it still points quite clearly to La Grippe as being its exciting cause. The patient had no suppurating centre in her body, so far as I was able to find. Her ears, nose and uterus were free from suppurative disease, nor was she suffering from any of the diseases noted above. The following is the history of her case:

Upon the 20th of January, 1892, when an epidemic of La Grippe was at its height in this city, I was called to see Mrs. J. M., a woman of about thirty-six years, the mother of three children. Until one week previous she had enjoyed excellent health. At that time she was suddenly taken sick. She was much prostrated from the first and complained of violent pain along the entire length of her spine. At times the pain was most severe in the dorsal region, but it shifted from point to point and finally it became extremely severe in the cervical and occipital regions. She also complained of a severe pain in the eyes and temples, especially upon the right side. Upon the 18th, 2 days before I saw her, the pain in the spine subsided but the pain in the right side of her face became much aggravated. Upon this date she noticed that her eye was becoming inflamed. It grew rapidly worse, and upon the 20th I found it in the following condition: The conjunctiva was decidedly oedematous, covering the peripheral edge of the cornea, and bulging

forward to such an extent that when the lids were closed it protruded between them. The cornea presented no abrasions, but was hazy in appearance. The contents of the anterior chamber had a muddy appearance, evidently purulent. Iris dull in appearance and contracted. Unable to obtain a view of the fundus. Red reflex could not be seen by oblique illumination. Vision, light perception only. Patient complained of severe pain in the eye. Temperature quite high with rapid pulse. Patient perfectly rational and gave a clear history of her case. I could discover no source of infection as she was not suffering from disease of ear, nose or any other organ. Her uterine functions were perfect, nor was she pregnant. I diagnosed her case as panophthalmitis, a sequellae of some constitutional disease from which she was suffering, in all probability La Grippe

Upon the 21st I found no improvement in her general condition while the eye was even more violently inflamed. The oedema had become so great as to bulge forward between the lids, while the anterior chamber was full of pus.

Upon the 22nd found the same violently inflamed condition of the eyeball. Temperature 105, pulse rapid. Patient talked excitedly and was evidently bordering upon delirium. Dr. Beebe saw the case today and pronounced it La Grippe.

23d. Found patient in a bad state. Pulse not so rapid, nor was temperature so high; but mind was very excited and at times she was delirious. It begins to look as though the meninges were becoming involved. Still had much pain in the eye and inflammation was very great, though there was a constant application of iced cloths.

24th. Patient's eye was no better and her mind was in a very confused condition. From this time on her condition gradually grew worse. When it became apparent that the eye was entirely lost, free and deep incisions were made across its equator. Some pus escaped and a free hemorrhage took place. This was repeated a second time two days later, after which the inflammation in the eye subsided rapidly and soon ceased to be a disturbing factor in the case. During this time the patient was passing through the various stages of meningitis. Her temperature ranged from 102½ to 105, except when controlled by antipyretics. She was delirious most of the time, though at times rational. She complained of much pain in the head, which was partially controlled by the ice cap For a few days she was wildly delirious, but later became quiet and indifferent, and previous to her death lost all consciousness, which continued to the end. Patient died upon the 5th of February, just seventeen days after the first symptoms of panophthalmitis began. Dr. C. S. Beck saw the case constantly with me. A post-mortem examination was refused.

The point of greatest interest in this history is the very unusual source from which the destructive inflammatory disease of the eye and meninges sprang.

That the patient was suffering from a severe attack of La Grippe there can be but little doubt, and it is also evident that it antedated the eye trouble by nearly a week. A number of cases of meningitis have been reported as sequellae to La Grippe, but they were all of a mild type, and permanently recovered. The severity of the cerebral inflammation in the case just reported, and the purulent condition of

the eye lead us to believe that there existed a similar purulent involvement of the meninges. It is also evident that the eye became involved, first through the circulation and from it the septic process was conveyed to the cranial cavity, along the sheath of the optic nerve. However, a second septic foci may have developed in the meninges simultaneously with that occurring in the eye, but on account of its location was slower in making itself manifest. Of the two views I incline to the former.

OCULAR AFFECTIONS IN GENERAL DISEASES —A REPORT.

By ROBERT L. RANDOLPH, M. D.
of Baltimore, Md.

A Contribution to the Ocular Disturbances in Infantilism (Microsomia) and Acromegaly by Prof. W. Uhthoff. Berliner klin. Wochenschr. Nr. 22-23 25, 1895 —Few observations have been made with reference to the ocular changes in myxodema (cretinism) and Prof. Uhthoff brings forward an interesting communication in this connection. The patient was a child fourteen years old who had ceased to develop since her ninth year. The thyroid gland had almost entirely disappeared. The skin was rough and suggested the condition met with in ichthyosis. There was no evidence of myxodema but on the contrary the child was emaciated and there was a peculiarly thin and atrophic condition of the skin. The intellect was unimpaired. There was temporal hemianopsia with progressive atrophy of the optic nerve and hemianopic pupillary reaction. Uhthoff's explanation of the case is as follows. A degeneration and atrophy of the thyroid gland occurred in early childhood (say about the ninth year)and this condition lead to the retarded development of the child and secondarily to an enlargement and degeneration of the pituitary gland, which in its turn caused the high grade of visual disturbance. The most remarkable fact in this case was the complete standstill in the growth of the child which had taken place as has been said in the ninth year. Two or three symptoms which are not commonly met with in myxodema would justify us in putting this case in a class by itself though undoubtedly there are strong reasons for believing that it is in some way allied to myxodema one of these reasons being the peculiar character of the visual field which undoubtedly points to an affection of the pituitary gland.

By bringing forward physiological and anatomical data and even

drawing upon pathological facts Uhthoff convinces one of the close relationship existing between the thyroid and pituitary glands.

Two interesting cases of acromegaly are reported. In the first case the papilla on the right side was abnormally white but the left eye was normal. In the second case both papillae were normal, but the fact was demonstrated in both cases that there was present pronounced temporal hemianopsia. This condition is to be regarded as an almost invariable one in acromegaly whenever the optic tracts are concerned and this rule holds good for all tumors of the pituitary gland.

The ophthalmoscopic condition in acromegaly is atrophic discoloration of the papilla while neuritis is very rare only ten cases of this character having been observed. The ocular disturbances in such cases are clearly explained by the pressure exercised upon the affected nerves by either the enlarged pituitary gland or the tumor in that region as the case may be and the sharply defined character of these visual disturbances makes them valuable diagnostic symptoms with reference to the localization and extent of the intracranial changes in acromegaly.

Spasms of the Ocular Muscles in Tetanus. By Dr. Karl Kunn, of Vienna. Deutsch. med. Wochenschr. 24 Juni, 1897.—Practically little is known of the symptomatology of spasms of the ocular muscles in tetanus because those who have written on the subject of tetanus have given little attention to the eye symptoms. In 1895 Kunn gave a complete description of spasms of the ocular muscles as seen in tetanus and his description is probably the first thorough one that was made up to that time. He has recently reported three more cases.

The picture presented by these spasms is typical, he thinks, of tetanus. The spasms may come on spontaneously or they may be induced voluntarily. They can be associated with spasms in other parts of the muscular system or they be isolated. They last for varying lengths of time, and may involve all of the ocular muscles. Sometimes convergent strabismus is seen and the patient is unable to rid himself of this condition. The pupils contract ad maximum and so does the ciliary muscle. The bulbar conjunctiva becomes red and there is lachrymation. Pains of a drawing character are often felt and the upper lids may droop and resist all efforts at elevation. When the attack is over everything returns to the normal condition. In the first case the spasms persisted becoming rarer all the while for a year after the subsidence of all the tetanus symptoms. The spasms differ from those

described by the same author as characteristic of athetosis in that the former involve also the muscles within the eye as is shown by the extreme myosis and indistinctness of vision. Diplopia was sometimes seen. The observations of Kunn form a valuable addition to the symptomatology of tetanus, a disease the rarity of which probably explains why we have heard so little of its ocular manifestations.

Disturbances of the Ocular Muscles in Multiple Sclerosis by Dr. Karl Kunn of Vienna. Klin. Rundschau, 1896, Nr. 20.—Kunn speaks of several symptoms which he observed in six cases of multiple sclerosis, symptoms which hitherto have not been described. In three of the six cases he observed the "fixation tremor," and five times dissociation of the ocular muscles was present that is to say there was true concomitant strabismus without the slightest lack of motility of the eyeballs together with diplopia, just as one sees in concomitant strabismus. A third symptom consisted in the inability to read or even to work on fine objects. Among other symptoms the patients complained of seeing a fog before the eyes and of the letters moving about the page. Lowered visual acuity for the distance was met with in greater or less degree. This is to be ascribed to the constant trembling of the pupil (described by Parinaud) seen in multiple sclerosis and which is a secondary symptom, due to similar movements of the ciliary muscle. This condition of the ciliary muscle is supposed to consist in a true ataxia of the muscle.

On the Occurrence of Retinal Hemorrhage after Middle Age and its Bearing on the Duration of Life. By Hasket Derby, M. D., Boston. Boston Med. and Surg. Journal, July 22, 1897.—Derby attaches great significance to retinal hemorrhages when they are found after middle life and in support of his views gives the histories of thirty one cases. The youngest of these cases was forty three and the oldest eighty three and all of them were the subjects of retinal hemorrhage. Twenty five of the cases died after brief illnesses, some indeed with the utmost suddenness. Eleven died of heart disease and fourteen of apoplexy. A retinal hemorrhage occurring after middle life while it may not always portend danger is an important symptom and one which increases in gravity with the age of the patient. Early diagnosis and the consequent recognition of the possibility of sudden death not only leads to the settlement of business interests (and herein lies the practical point) that in the event of an unexpected demise might suffer but causes advice to be given that may sensibly prolong the days of the patient. Auscultation thus suggested might detect

the presence of an hitherto unsuspected lesion. In any case suitable diet, leading a regular life and above all the avoidance of exhausting work or excessive mental activity have lengthened many a life thus threatened. Derby's observations are valuable and certainly no one will disagree with his conclusions.

Hemorrhagic Retinitis in Hysteria. Report of a Case, by M. Sauvineau. Société d'Ophtalmologie de Paris. Seance du 6 avril 1897.—The case was that of a girl 19 years old who had been the subject of hysteria for a long time. Her heart was sound and there was no evidence of either albuminuria or diabetes. The day after an hysterical attack her vision became suddenly dim. In the left eye there were to be seen grayish streaks along the retinal vessels which looked like exudates and several hemorrhages one of which had a diameter of a small lentil. The fundus of the right eye was normal. The field of vision was narrowed for white and for colors. The condition was probably to be attributed to disturbances in the vasomotor system, having the effect of increasing blood pressure and causing a sudden congestive stasis in a vascular system already enfeebled by chlorosis.

Remarks upon some Ocular Troubles depending upon the General Condition. By Dr. Emile Berger. Archives D'Ophtalmologie. T. XVII. No. 8.—This observer reports four cases of disturbances in vision in patients who had just recovered from severe constitutional affections. Berger does not think however that the ocular disturbances should be attributed in his cases to the constitutional affection but to the neurasthenia or hysteria which had developed in the course of this affection. In the first case the patient had had yellow fever and presented characteristic symptoms of neurasthenia developed in his case during convalescence. In the second and third case the visual disturbances consisted in an hysterical amblyopia which was due neither to the "Caisson Disease" nor to the "Addison's Disease" (with which the second and third case were affected respectively) but to a concomitant hysteria which had passed unnoticed in view of the gravity of the principal diseases. In the fourth case where hysterectomy had been performed for the purpose of curing hysteria the operation not only failed to relieve but on the contrary provoked an amblyopia and hysterical attacks of weakness or failure of sight (copyopia). From these observations one would conclude that in eye troubles following general diseases a careful examination will often reveal a neurasthenic or hysterical origin for the ocular disturbances.

Interstitial Keratitis in Acquired Syphilis. By M. Trousseau. Presse med., 15 mai. 1897.—This observer reports eleven cases of interstitial keratitis in acquired syphilis. The affection differs in some points from the form seen in hereditary syphilis. It is very frequently unilateral. The cornea becomes opaque in small islets scattered here and there and which gradually become confluent. There is less tendency to vascularization and less inflammatory reaction. Specific treatment is rapidly beneficial.

Spontaneous Effusion of Blood into the Eye in a Case of Hereditary Haemophilia. By Prof. Wagenmann. Archiv für Oph. Bd. XLIV, Ab. I. The case reported by Wagenmann is an exceedingly rare one. The patient was a bleeder and belonged to a family of bleeders. The application of an artificial leech to his temple had provoked long and obstinate bleeding. The hemorrhage here was spontaneous and consisted of an effusion of blood into the anterior chamber, and probably into the deeper structures of the eye. Resorption took place slowly and was often interrupted by the appearance of fresh hemorrhages. The condition led to blindness. The case would seem to show that when we meet with severe intraocular hemorrhages spontaneous in character we should inquire closely into the personal and family history of the patient and be on the lookout for congenital haemophilia.

Successive Blinding of Both Eyes through Extraocular and Intraocular Hemorrhage, in a Case of Haemophilia. By Albrecht von Weber. Ibid.—Von Weber's patient was a young man who had suffered an injury to his right eye. The boy was a bleeder. The injury had been followed by profuse hemorrhage into the skin of the lids and conjunctiva and also from the nose and mouth and later on from the stomach. Sight was destroyed. Eleven years afterward hemorrhages in the retina of the other eye occurred and in a similar manner blindness followed.

OPHTHALMIC MEMORANDA.

By G. E. de SCHWEINITZ, M. D.,
Philadelphia, Pa.

ILLUSTRATED.

I. **Absorption of the Pigment after Bloodstaining of the Cornea.**—The early history of this case has already been reported.* An abstract of this record, briefly, is the following:

On the 28th of February, 1896, a girl aged three and a half years, was brought to the Jefferson Medical College Hospital for traumatic hernia of the iris. The child had received a wound of the right eye from a pair of sharp scissors at the corneo-scleral junction, through which there was an extensive prolapse of the iris. There was little irritation and the anterior chamber had been restored, but as the prolapse appeared to be increasing, it was abscised. The operation was followed by a smart hemorrhage which filled the anterior chamber. A pressure bandage was applied and the child was put to bed. At the end of twenty-four hours, absorption of this blood had taken place, but partly owing to the extreme restlessness of the patient, successive hemorrhages occurred, and when she was dismissed from the hospital three days later, at the request of her parents, although contrary to our advice, the anterior chamber was so full of blood that all underlying tissues were obscured. One week later there were distinct symptoms of cyclitis, a fine flush surrounding the corneal margin. Under atropin and the internal administration of small doses of calomel, this condition subsided. Indeed, the cyclitis disappeared in spite of the fact that in the meantime the child was attacked with measles and passed through the ordinary phenomena of this exanthem. As early as the tenth day after the operation, and very markedly after the attack of measles, we began to notice a discoloration of the cornea. This increased until there was typical bloodstaining of the cornea, which caused this membrane to assume a greenish-brown color, with the exception of a small rim, two millimeters in diameter at its circumference.

The patient was not again seen for fifteen months, when the following changes had taken place: the blood-staining had disappeared except in the very centre of the cornea where a small oval patch of brownish hue with sharply marked edge could still be discerned, especially on employing oblique illumination, but even this patch was translucent and the iris could everywhere be seen, as well as the coloboma in its lower portion.

It should be remembered that the original pigmentation was so complete that the entire cornea, with the exception of the rim two millimeters in diameter at its circumference, had assumed a deep, greenish-brown color, absolutely hiding all tissues lying beneath it.

This observation exactly confirms one which has been made by Mr. E. Treacher Collins,† also a case of discoloration of the cornea following hemorrhage into the anterior chamber after removal of a prolapsed iris. The cornea in this case cleared from the centre to the periphery and became entirely translucent at the end of two years, al-

*Philadelphia Polyclinic, 1896, Vol. V, No. 36; The Medical News, New York, July 3, 1897.
†Trans. Ophth. Soc. U. K., 1895, XV, p. 64

though at the end of one year there was still a grayish patch about four millimeters in diameter. The first signs of clearing were noted fifteen days after the accident.

In my own case it was possible to discern at the end of a few weeks an increase in the width of the narrow rim of cornea which was not originally stained. With this clearing from the periphery, there was a condensation, so to speak, of the pigment in the centre. It seems evident, then, although disappearance of the pigmentation in blood-staining of the cornea begins early, fully eighteen months or two years must elapse before the cornea assumes complete transparency.

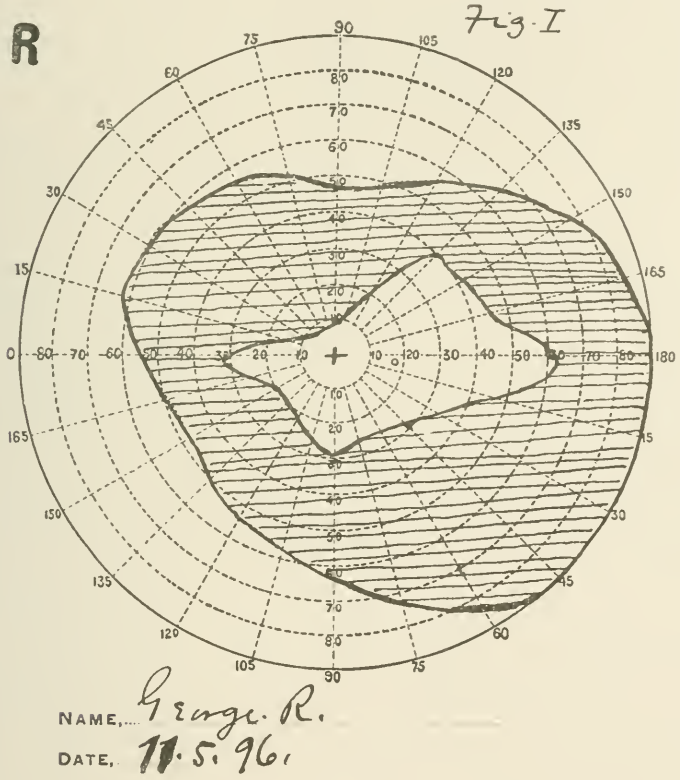
II. **Glaucoma Three Years After Extraction of Cataract by the Combined Method: Contraction of the Visual Field with Gradual Loss of Vision in Spite of Eserine and Paracentesis of the Cornea.** —Glaucoma as an occasional complication after discission, occurring according to Knapp in about 2 per cent. of the cases, is well recognized and its treatment by eserine locally, morphia and chloral internally, or if these measures fail, by iridectomy, usually successful. Glaucoma may also complicate cataract extraction after severe iritis with numerous posterior synechiae and the formation of a membrane. As is well-known, under the same circumstances it also follows iritis which is characterized by a deep anterior chamber and dotted opacities on the cornea; or occurs after an iritis which is only slight in character when there has been an adherence of the pillars of the coloboma to the cicatrix and also to the lens capsule. Although glaucoma after cataract extraction more commonly appears soon after the primary operation, and is associated with types of iritis such as have been described, it may also develop as a very late complication. This subject has received attention recently in a paper by Pagenstecher, and in a most interesting communication by Dr. S. C. Ayres.* Five cases are reported, glaucoma appearing in one in the left eye eleven and in the right eye twenty years after operation; in another two years and in a third two months after successful cataract extractions. To this series of cases I add the following:

George R., a healthy man, aged 58, reported for treatment October 8, 1893, having in the right eye a ripe, white cataract and in the left eye a partially opaque lens. Three days later the cataract of the right eye was removed by the combined method. The cortex was fluid; there was no accident. Convalescence was rather slow and there was a very slight incarceration of the left pillar of the coloboma in the edge of the wound. Six weeks after extraction vision with $+8.^{s} \bigcirc +5.^{c}$ axis 165 was $\frac{3}{3}$. There was a large opening in the centre of the capsule and the fundus

*Archives of Ophthalmology, 1897, XXVI. No. 2, p. 208.

was normal. Three months later the following combination was accepted: + 11s ⊃ + 4c axis 165, V = $\frac{6}{6}$; with + 4 added, J I readily. This glass was worn for somewhat over a year, when a still weaker cylinder was required, namely, + 3c, the axis remaining the same, and with this glass the vision was $\frac{6}{5}$.

The patient was not seen again until the 5th of October, 1896, or just three years after the primary operation, when h¹ vision was found to be $\frac{6}{60}$, a fine dotted haze through the cornea obscuring the fundus; tension + ?. The field of vision showed a distinct contraction upon the nasal side. After the use of eserine the



vision rose to $\frac{6}{15}$. The nature of the difficulty was explained, operation was advised, but the patient preferred to try medicinal measures, namely, eserine and iodide of sodium. He returned at the end of a month, his vision having materially depreciated; in fact, he was scarcely able to count fingers and the visual field was contracted in the manner shown in the diagram. Fig. 1. The haze in the cornea had increased and the tension was + 1. Consent to perform paracentesis was obtained, but little or no improvement in vision followed the operation.

The cataract on the left side had in the meantime completely ripened, and as the patient understood that his chances of obtaining vision were very much better

from an extraction of this cataract than from further operative interference on the glaucomatous eye, he decided in favor of extraction, which was performed by the combined method The healing was perfectly normal, and after a discission six weeks subsequent to the extraction his vision with $+ 11^{s} \bigcirc + 2^{c}$ axis 15 was $\frac{6}{6}$

Under the influence of eserine and the internal administration of iodide of sodium, the haze in the cornea of the glaucomatous eye gradually disappeared permitting ophthalmoscopic examination, which revealed a greenish, completely cupped disc and contracted bloodvessels. V = nil.

It is interesting to note in this case that there was a small prolapse of the iris in the angle of the wound, a prolapse, however, that was entirely innocuous for three years, during which the patient enjoyed perfect vision. He first noticed beginning depreciation of sight after a very hot summer, during which he was accustomed to read for long periods of time, sitting in the open air, and, as was explained by a member of his family, exposed to the glare of a good deal of sunlight. Whether this was the determining cause of the process which eventuated in glaucoma is purely a matter of conjecture. Had the patient come for consultation during the early period of his glaucomatous symptoms, it is not unlikely that prompt operative interference would have saved his sight, but although he noticed his visual disabilities in July, he did not appear for treatment until the following October; and even then deferred operative interference for another month.

III. **The Development of Myopia as an Ocular Symptom of Diabetes Mellitus.**—Although changes in the refractive condition of the eye during the course of diabetes mellitus have been observed not infrequently and a number of examples recorded, the subject has perhaps not received the attention which it deserves, and the report of the following cases as good examples of symptomatic myopia is warranted.

Case I **Myopia Developing During the Course of Diabetes in a Man aged 51; Clear Media; absence of Fundus Changes.**—In June, 1891, the patient at that time aged 47, consulted me for the relief of failing vision incident to beginning presbyopia. Save for a slight veiling of the edges of the discs, which were rather gray-red in color, there were no fundus lesions. Each eye was hypermetropic, + 1.25 D; the pupils were normal; there were no insufficiencies of the ocular muscles.

The patient was not seen again until the 10th of May, 1895, when he came complaining not of any lack of the power of his reading glass, but that objects at a distance were daily growing more indistinct The vision which four years before had been normal, was now scarcely one-half and it required - 0.50^{s} to give him full vision acuity. The media were clear and the discs not more hazy than they had been at his original visit four years before. Minute examination of the vitreous with the aid of successively stronger convex lenses failed to reveal morbid elements. Suspecting sugar in the urine as a possible exciting factor in this case, the patient was urged to seek general medical advice. He consulted Dr. James Tyson,

who found all of the usual symptoms of diabetes. He has kindly furnished records of the following examinations of the urine:

May 11th 1895, { a. m. urine; specific gravity 1040; sugar 5.5 per cent.
p. m " " " 1035; " 5 5 "

May 17th, 1895, { a. m. " " " 1025; " 5 "
p. m. " " " 1030; " 2.5 "

June 14th, 1895, { a. m. " " " 1027; no sugar.
p. m " " " 1030; " "

It is interesting to observe in this case, which is typical of others occurring during diabetes, that the ophthalmoscope failed to reveal any decided lesion, although, no doubt, Knies is correct in his statement that spontaneous short-sightedness appearing between the ages of forty and sixty years among diabetics when there is no opacity of the lens, may be attributed to a diffuse affection of the choroid, in which the pigment epithelium is slightly or not at all affected, but the sclera is softened and yields. In other words, choroidal affection not certainly demonstrable by the ophthalmoscope may be assumed. It is possible, too, that the ametropic changes in such cases may be explained, as Charles Oliver has sought to explain the transient myopia of iritis, by a perversion of the lens action from spastic accommodation as the result of ciliary irritation.

2 **Rapid Increase of Myopia in a Girl Aged Twenty Suffering from Diabetes; Choroidal Oedema and Secondary Hyalitis.**—The patient, a pallid studious girl, consulted me in the latter portion of 1895 for the relief of brow headache, worse after reading or other close ocular work. There were no changes in the fundus of either eye, save perhaps an undue grayness in the deeper layers of the discs There was a small congenital posterior capsular opacity in each eye. After atropine mydriasis the following combination was found to be the correcting glass

O. D. + 0 25^{s} ⊃ — 0 75^{c} axis 135, $\frac{6}{10}$.

O. S. — 0.62^{c} axis 15, $\frac{6}{7.5}$.

The patient was not seen for six months, when she came complaining that for the past month her vision had rapidly been growing worse, following hard upon a somewhat prolonged illness The urine was found to contain sugar, and on correspondence with her physician, Dr James Wikoff, of Princeton, it was further ascertained that the diabetic symptoms had first become manifest shortly after her original visit, and that ever since the urine had contained large quantities of sugar, although there had been some improvement under proper diatetic managemen and the internal administration of arsenic.

Ocular examination at this date revealed in the right eye, where there had previously existed a slight mixed astigmatism, a myopia of 3 D, and in the left eye in which there had been a slight simple myopic astigmatism, a myopia of 2 D. Concave sphericals of these denominations added to the astigmatic lenses yielded a vision in the right eye of $\frac{6}{2_2}$ and in the left eye of $\frac{6}{1_2}$ There was a somewhat fluffy appearance of the choroid, perhaps indicating the beginning of the oedema which later became a marked feature

Iodide of sodium was added to her treatment, and she returned in three months with her vision about the same as at the last record. Now the oedematous condition of the choroid was pronounced and fine vitreous opacities could be detected, especially in the right eye. A month later the myopia of the right eye remained the same, but in the left eye had increased to —5 D, and the fundus changes previously described were slightly more marked. The patient was not again seen, and not long afterwards died.

During six months there was an increase of refractive power in one eye amounting 5 D and in the other to 3.25 D, the greater bulk of the ametropic change having occurred during one month. The ophthalmoscope revealed, even in the earlier stages of the affection, a distinctly oedematous appearance, or what has been called under similar circumstances a diffuse affection of the choroid, which is no doubt the underlying pathological process in most of these cases.

CASE SIMULATING TUMOUR OF THE BRAIN IN WHICH THERE WERE PRESENT HEADACHE, VOMITING AND OPTIC NEURITIS, WITH REMARKS.

By ALFRED J. HORSEY, M. D., M. R. C. S. ENG., L. R. C. P. ED.

Ottawa Ont., Canada.

B. H. Telegraph operator, single, aged twenty-six years, spare habit of body, rather pale but not distinctly anemic. At no time has had any serious illness or injury. No specific history, hereditary or acquired, none of blow or fall, no ear affection or trouble in eyes before. No neurotic attacks of any kind. Nothing noteworthy in family history. Has of late had headaches and weak stomach with frequent vomiting, paroxysmal in character.

Complains that sight in right eye has been gradually failing for the past three months; so that it is with great difficulty she continues her work. It was on account of failing sight that her medical adviser referred her to me—on Feb 18th, 1895.

There was no pain felt nor external changes to be seen in the eyes; pupils were equal and responsive to light. R. V. $\frac{20}{200}$, while the left was $\frac{20}{20}$. The ophthalmoscope showed marked optic neuritis in the right. The papilla being swollen about two millimeters.

The vessels were seen to make great sweeping curves over it; the veins being enlarged tortuous and dark when they descended the sides of the papilla, while their light streaks were absent.

The margins of the disc for their whole circumference were obscured by red and grey streaks, the disc itself being pale and hazy with a few small straight vessels upon its surface.

There were no hemorrhages to be seen, nor any changes in the retina beyond the disc.

The left eye presented nothing morbid; was emmetropic in refraction and normal in vision.

Iodide of Potassium was ordered in gr. v. doses three times daily and she was to continue an iron tonic given by her medical adviser.

She was also to discontinue work which she did for six weeks only, as she was most anxious to retain her situation. By March the 6th marked abatement of the swelling and inflammation of the disc had taken place and vision had improved so that she could read $\frac{20}{60}$ fluently with the right eye.

By March the 16th the swelling of the disc had further subsided so that its edges were becoming discernable, vision still $\frac{20}{60}$ in the right eye.

On May 21st vision was found to have somewhat relapsed, $\frac{20}{60}$ could be read with difficulty.

The iodide of potassium and iron were taken more or less constantly till the end of the year, work had been continued which she now could do with less fatigue than previously.

Headaches and vomiting still continued but less frequently—they never had been very severe, were unexplainable and paroxysmal, she attributing them to "bilious attacks."

She was lost sight of for several months when on Jan. 22nd, she again consulted me because of failure in the other (left) eye that is nearly a year after she came to me for the right eye and more than a year after the sight had been noticed to fail.

The ophthalmescope showed unmistakable papillitis (optic neuritis) presenting features very similar to those seen in the right eye but of a less intense character; the vision of which had deteriorated to $\frac{20}{30}$ which before had been normal. The vision in the right eye had now improved to $\frac{1}{2}$. She still continued at work, the left not causing nearly so much disability as the right eye had done. In six weeks it began to clear and in a few weeks more resumed the normal in appearance and vision. As it continued to be on Oct 5th '96. When seen by request on March 1st '97, her general health was fair, but still had headaches referable to the front of the head, vision in right eye $\frac{20}{40}$ in the left $\frac{20}{20}$.

Both discs had now almost wholly cleared, the right looked somewhat pale and the edges blurred. It had lost its swelling and the vessels their curve, the arteries had not shrunken there were no light streaks accompanying them, or connective tissue changes visible.

P. S. Patient by request seen just before sending this to press, expressed herself as being in better health than a year ago—but looked pale and fatigued; still continued her work as a telegraph operator. Headaches less frequent and severe, vomiting ceased. Is able to read some of the letters of last line of Snellen's wall type at six meters with either eye. Papillae appear normal.

The case amongst other things goes to show that even chronic optic neuritis is not invariably a sign of central tumour, clinically such cases are of importance as they simulate disease of the brain and their occurrence however rare detracted somewhat from the significance of optic neuritis as a sign of intracranial disease.

Sir. W. R. Gowers in his recent clinical lectures on the nervous system; says, "the chief and first significance of optic neuritis is the

presence of organic disease, if you can exclude a blood state or constitutional condition, you may feel sure that there is a recognizable organic change within the skull or orbit."

But this is not so readily done as there are several known conditions of the blood which give rise to it. Amongst these are anemia which may cause most intense neuritis which in a few weeks yields to the administration of iron. Bright disease is another cause of it, often without the characteristic retinal affection. Lead poisoning is another cause of it. Both Cooper and Sir Hughlings Jackson think hypermetropia may cause it. "Though Sir Hughlings Jackson states that tumours within the skull are the common cause of optic neuritis, they may exist without it, so that it may occur with tumours of any part; and may not occur with tumours in any part of the brain.

In the face of such evidence from such authorities as these quoted the case was regarded with considerable gravity. Then upon rightly determining the causation, depended the treatment which was to influence the ultimate prognosis as to vision or even life itself. The papillitis being uniocular or more correctly speaking was so for nearly a year before the other eye became affected made its interpretation less comprehensible. In considering it after the lapse of time it is more reasonable to regard it as one in which the manifestation in the second eye was delayed rather than that of one-sided papillitis; the causation being the same in each. The precedence according to good authority being a few weeks, both eyes being involved together one in a stage in advance of the other. Practically when first seen and for several months afterwards the case was one-sided, the rarity of which may be inferred by the statement of Sir. W. R. Gowers that, "the only case in which he had seen it in brain disease was one in which the tumour was so situated as to prevent fluid which distended the optic nerve sheath from passing along the sheath.

Dr. Hughlings Jackson at a meeting of the *Oph. Socty. of the United Kingdom* as reported in the Lancet, spoke of the rarity of O. N. in physicians practice, especially in tumours of the brain; proved post-mortem."

The foregoing knowledge taken along with that of Mr. Marcus Gunn in "Heath's Dictionary of Surgery, that it is usually dependant upon a local cause, orbital cellulitis, periostitis or tumours of the orbit though it may occur in association with intra-cranial tumour at the optic foramen or on the optic nerve," made me regard the case somewhat less gravely, yet there was nothing in the case we are consider-

ing to indicate disease of a local character in the orbit, no proptosis, no abridgement of motion of the globe or periostitis or cellulitis, again Dr. W. R. Gowers in his clinical lectures before quoted says, "that it is rare for optic neuritis to be one-sided. It is one of the symptoms that occurs on both sides at the same time because as a rule its cause is either an influence from the brain which acts equally on the two sides or an influence from the blood which has an influence so general that its effects are bilateral."

"Sir. H. Jackson says there are usually three things that go with cerebral tumour: Optic neuritis, headaches, vomiting, though they may all be absent."

This case presented all three of these in a fairly prominent degree yet the subject of it after two years and a half is in fair health and follows her usual occupation, so we may reasonably conclude she has not tumour of the brain commonly speaking—though possibly has had some coarse adventitious product within the cranium, or that it was due to a blood condition. That we are justified in attributing it to syphilis without some further evidence, that it cleared up while taking iodide of potassium is not warrantable as there are other conditions which are dissipated by iodide of potassium that are not syphilitic—so from a diagnostic point cannot be said to be proven. To give potassium iodide when the neuritis is dependant on anemia may be fatal to sight as tissue changes may occur which would have been stayed by iron. As to anemia being the cause there are some unreconsilable conditions. Iron had been taken several weeks before coming to me without improvement. Its long one sidedness which is against a general condition that it should at length clear up on one side, and the other become involved while she was taking iron and iodide of potassium is not indicative of a blood causation, but should consider it less so of anemia than syphilis.

The cause of the O. N. in this case was to my mind undetermined and that treatment influenced it is doubtful. Iodide of patassium was given because it might be dependent upon some syphilitic growth—and the iron allowed to be continued to improve the blood.

ON THE USE OF EPITHELIAL LIP-FLAPS AND HALF-SKIN FLAPS IN EYE SURGERY.

By H. Gifford, M. D.
Omaha, Nebraska.

ILLUSTRATED

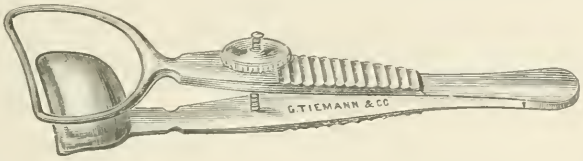
By epithelial lip-flaps, I do not mean mucous flaps obtained in the ordinary way, with knife or scissors and forceps, for these, even when carefully trimmed on the under side, contain practically the whole thickness of the mucous membrane. The flaps to which I refer correspond, histologically, for mucous membranes, to the Thiersch skin-flaps; and they are obtained by exposing and rendering tense the inner surface of the lip or some other mucous membrane; and, with a sharp razor, cutting a flap so thin that only the epithelium and a very little of the subjacent tissue is removed. Such flaps have only a narrow range of application but within that range, namely, in replacing ocular, and, in some cases, palpebral conjunctiva they are unrivalled; and the results which I have obtained with them during the last three and a half years have been so excellent that I feel like urging their more general use.

For the cure of entropium, as in Van Milligan's operation, these epithelial flaps are far inferior to the ordinary thick lip-flaps; but the latter, when grafted upon the surface of the eye-ball, retain a fleshy appearance which makes them very undesirable from a cosmetic point of view. I have used the epithelial flaps chiefly in operations for symblepharon; to replace conjunctiva excised with new growths; in some cases of xerophthalmia, where areas of still active, deep seated, tarsal trachoma were excised; and in the treatment of pterygium, in place of the Thiersch-flaps recommended by Hotz. My reason for preferring them to Thiersch-flaps, which I have also used extensively, in similar operations, is that skin, if it heals upon a mucous surface, remains skin without the slightest tendency to become mucoid in character. This I can positively assert after watching a number of cases for a number of years.* The result is that the epidermal cells, not being exposed to the same friction as on the surface of the body, accumulate on the grafts and probably, to some extent, decompose. This gives on close inspection an unpleasant appearance, in some cases, and where the area covered by the flaps is extensive, a constant though slight irritation of the conjunctiva generally ensued, unless the accumulations

*I have just seen a woman into the under surface of whose lids I put Thiersch flaps nearly seven years ago. They are just as much skin as ever; and nearly every week or so, she everts the lids and wipes the accumulated epidermis from off the flaps, to prevent a slight irritation of the cornea which otherwise occurs.

of epidermis are wiped off at regular intervals. When the Thiersch flaps rub on the cornea, there is also a slight mechanical irritation which though not important, in otherwise normal eyes, is decidedly detrimental in trachomatous eyes.†

Probably the main reason why these thin lip-flaps have not been used more generally, is that it is hard to get at the lining of the lips so as to use a razor easily; and to facilitate the process I have had a large clamp made of which the solid blade is smaller and set at an



angle with the shank so as to pass clear through the fenestrum of the other blade. Closing the blades upon the lip forces the latter into a tense prominence from which the membrane can easily be shaved.‡ The surface must of course be kept wet and the razor must be sharp. In cutting flaps to replace palpebral conjunctiva, it is better to cut them nearly twice as thick as where they are to be applied on the ball. They should be slid directly from the razor to the denuded surface and there trimmed if necessary. After pressing them down rather firmly with moist-tooth-pick swabs, they should be allowed to dry on, so to speak, for two to three minutes before the lids are allowed to close. A binocular bandage should be left on for the first twenty four hours and after that a monocular for four to five days. After a few days, a thin pellicle of epithelium is thrown off and what is left is so very thin and transparent that one is at first inclined to think that the whole flap has necrosed, but after some days it becomes evident that the flap is alive, although it is so much like the conjunctiva that its boundaries are hard to trace. As a rule, these flaps, after healing on, contract a little, but not much, more than Thiersch flaps, under similar circumstances. Occasionally though, for reasons which I do not understand the contraction is quite marked. Another slight disadvantage attaching to the use of the epithelial flaps arises from their extreme delicacy;

†Where a very small strip of skin is grafted upon the eye-ball, as in the operation for pterygium most recently described by Hotz, the accumulations of epidermis are generally so small as to cause no trouble and since even the thinnest lip flaps have a faint tinge of pink the skin-flaps are probably preferable where the surface to be covered is not larger than in this case. For recurrent pterygium, however, quite large grafts are sometimes required and, here, the thin lip-flaps can be used with advantage.

‡This clamp (made by Tiemann & Co., 107 Park Row, N. Y.) is also the best that I know for getting the long thick strips of lip sometimes necessary for Van Milligan's operation for entropium.

this necessitates great care in handling them for if one lose track of the side which should go down, it is almost impossible to decide, by inspection, which it is; and it usually saves time to throw the flap away and cut a new one.

On Half-Skin Flaps.

By half-skin flaps, I mean skin flaps which, in point of thickness, are about half way between the Thiersch flaps and the Wolfe flaps, or whole-skin flaps without a pedicle. They should be cut with a razor used as in cutting Thiersch flaps, with the exception that instead of cutting off about as thin a layer of skin as possible one should make them about 1/8 of an inch in thickness. Such a flap has, for the cure of severe ectropium or for replacing any extensive loss of the skin of either lid, a decided advantage over either the Thiersch flap or the whole-skin flap. When Thiersch flaps are used in these operations, the immediate results are apt to be excellent, but subsequently, particularly where it is the upper lid that is concerned, the effect is much reduced, on account of the Thiersch flap offering so little resistance to the contraction of the sub-cutaneous tissues. Where whole-skin flaps are used in such operations they heal on without difficulty, but while the lower layers are healing on, the upper layers, in my experience, always die, with much surface contraction as a final result. This contraction may sometimes be greatly reduced by the method which I suggested some years ago of scraping away the necrosed tissue and putting on a secondary Thiersch flap. But in doing this it is difficult to judge how much tissue to scrape away; so that while, in some cases, I have obtained excellent results by the process, in others the secondary Thiersch flap has failed to heal on, on account of an insufficient removal of the necrosed tissue. The half-skin flaps offer much greater resistance to sub-cutaneous contraction than the Thiersch flaps; and are not as subject to surface necrosis as a whole-skin flap. In the five operations in which I have hitherto used them a slight surface necrosis has occurred in two. In one of these, the necrosis involved so small a part of the surface of the flap that it did not affect the result; while in the other, in which nearly all the skin of one side of the face had to be removed for epithelioma, the secondary application of Thiersch flaps to two separate areas of necrosis succeeded perfectly.

I have no doubt that others have used these half-skin flaps but, so far as I know, they have not been specifically designated nor has their use been systematically urged.

A CASE OF STRABISMUS IN A PURE-BLOODED NEGRO.

By CHARLES W. KOLLOCK, M. D.

President South Caro'ina Medical Assoc. Member Amer. Med. Assoc. and Amer. Ophth. Society.

Charleston, S. C.

ILLUSTRATED.

Some eight or ten years ago I was asked if I had ever seen a case of strabismus in a pure-blooded negro. I had never thought of it before and had no recollection of having seen such a case, but knew that it was not of infrequent occurrence in mulattoes. Since then I have examined the eyes of a great many pure blooded negroes but not until within the last month has such a case been seen. Of course one sees

many negroes who have crossed eyes or squints, which upon examination are usually found to be caused by one or more of the following conditions, viz. corneal leucomata, opaque lenses, diseases of the retina, choroid and optic nerve and paralysis of the ocular muscles. But a pure case of strabismus, such as occurs in hyperopic eyes, is a rare occurrence in the full-blooded negro.

My attention was recently called to a negro boy fourteen years of age in the ward of the Charleston City Hospital. He was under treatment for a slight injury of one leg. Examination showed an alternating squint as he could use one eye as readily as the other but never had binocular vision. The squinting eye turned in

so that the cornea was nearly hidden by the lids and caruncle. Atropine was instilled and by the test glasses, ophthalmoscopic and shadow tests he was found to have two dioptries of hyperopia. By the aid of the glasses vision in each eye became $\frac{20}{20}$, but the squint was not in the least altered by the lenses.

This case is unique in my experience as the eyes were without blemish, were not amblyopic and all the ocular muscles were strong. The accompanying photographs show the alternating squints very plainly.

THE INFLUENCE OF ANKYLOSTOMIASIS ON THE EYE.*

BY DR. A. NIEDEN.
Bochum, Germany.
Translated by Casey A. Wood, Chicago.

Until a few decades ago the occurrence of the Ankylostomum duodenale was believed to be restricted to a few southern countries and to the tropics. Even Leukart in 1869 in his "*Handbuch der mensch-*

*Read before the Ophthalmological Section, International Medical Congress, at Moscow August, 1897.

lichen Parasitenlehre'' remarks: ''The parasite is probably never found on this side of the Alps.'' Modern investigation, however, has shown that the assertion, even at that time, was entirely incorrect. The actual presence of the ova of the parasite in the feces of living subjects was first demonstrated in the years 1877-78 by the Italians Grassi and Parona. Following these came the more extensive investigations of Perroncitto, explaining the actual cause of the so-called ''tunnel anaemia'' that affected the workmen employed in the underground borings of the St. Gotthard railroad.

Although it is true that in 1838 Dubini of Milan frequently found a parasite in the intestines of patients who had died of anaemia, and which Theodor von Siebold correctly diagnosed as belonging to the genus strongylus, it was not until the investigations of Bilharz in 1853 and Griesinger in 1854 that the parasite was recognized as the cause of ''Egyptian Chlorosis.'' After the diagnosis had thus been placed on a firm basis, the various modifications of this form of anaemia, which up to that time had been attributed to manifold causes, were readily diagnosed, as reports from Brazil, Japan, the East Indies, Louisiana etc. from the end of the '60's will show. It was noticed in this connection, firstly, that people addicted to the peculiar habit of dirt-eating were easily attacked by this disease of the blood and, secondly, that workmen in brickyards, mines, tunnels and charcoal furnaces also readily fell victims to the parasite. This gave rise to the various synonyms, *Anaemia intertropicalis, oppilacas, latericia or montana, allotriophagia, maladie de terre* and *Tunnelanämie*. The discovery of the Ankylostomum in the intestines of miners in Sardinia, France (St. Etienne,) and Hungary (Kremnitz and Schemnitz) by Baccelli and Perroncitto furnished the clue to the etiology of all the cases of chlorosis among miners reported since the beginning of the century, the first of these occurring among workers in the mines of Valenciennes in France. This finding is further substantiated by the investigations of Masius, Francotte, van Beneden etc. in Belgium. It is very probable that the parasite was brought by Belgian miners to the Rhenish and Westphalian coal mines, and the recent studies of Leichtenstern, Löbker and Tenholt show that, to a greater or less extent, the entire population of these collieries, the largest in Germany, is afflicted with the disease.

In consequence of numerous opportunities for studying the nature of this disease in its various phases, and as examinations of organs remote from the initial seat of the malady became more frequent, it was

discovered that the eye often shows pathologic changes which must be regarded as entirely due to the parasitic disorder. Rampoldi (1887) and Fischer (Dortmund, 1892) first called attention to these complications, but on account of the small amount of material at their command they were unable to form any definite conclusions regarding their cause. Inasmuch as I have had occasion to examine several hundred cases, I take this opportunity of briefly recounting a few of the chief points of interest. I may say, to begin with, that the Ankylostomum duodenale is a nematode, belonging to the family of the strongylidae, (Dochmius) and that it derives its name from the fact that the body has a peculiar angular (ἀγκυλος) bend and that the duodenum was formerly looked upon as its habitat. The latter view has not been borne out by autopsies, the upper portion of the small intestines (jejunum) having been found to be the favorite resort of the parasite. The male worm is lighter in color, shorter (6-8 mm.) and narrower than the female, which is of a yellowish-brown color and 10-12 mm. in length. The head exhibits a wide mouth that opens into a capacious oral cavity. The latter is supplied with six tooth-like projections. The oral cavity communicates with the gradually widening oesophagus, which in turn terminates in the chylific intestine. The latter ends, in the female, in a cone-shaped tail, in the male in the cloaca, which contains the genital opening with its conical penis and two long spiculae. The spiculae hold the female during the act of coition. From the female genital opening a short vagina leads into an anterior and a posterior tubular cavity which contains the countless convolutions of the ovaries and tubes.

The ripe ova deposited in the human intestine are oval in form, 0.04—0.06 mm. long, 0.03 mm. wide and are, without exception, when discovered, found to be undergoing segmentation. The latter process does not continue, however, within the human intestine until the complete development of the embryo, on account of a lack of oxygen. For this latter purpose it is necessary that the ova find suitable surroundings (moisture and warmth) outside the body. In three days after leaving the intestine the embryo emerges from its capsule. The number of ova found in the human host is enormous. Leichtenstern found 19,000 in one gram of faeces. If we divide the number of ova found in one gram of faeces by 47, we obtain approximately the number of parasites that have found their way into the intestines. The proportion of males to females is as 1:3-6. The embryo becomes encapsulated at the end of four days in a transparent covering

and remains thus encysted until it is introduced into the human body. The cyst wall is then dissolved by the gastric juices and the liberated embryo enters the small intestine where it soon develops into a full grown worm. As such it now fulfills to the fullest extent the two purposes of its existence, viz: nourishing itself by sucking inordinate quantities of blood from its host and propogating its kind in the most extensive fashion. The ova may be discovered in the feces four to five weeks after the ingestion of the parasite, the life of the latter being from six to eight years.

The ankylostomum derives its nourishment from the plasma of the blood and does not assimilate the corpuscular elements, which pass through almost unchanged. It takes in much more food than it actually needs and for this reason Leichtenstern has properly given it the name of "*Lususparasit.*" The loss of blood to the host is often augmented by secondary hemorrhage from the bites. The direct result of this constant loss of blood, which is at times very great (frequently 3,000 worms are found in one intestine), is excessive anaemia of all the organs. The early symptoms are manifested in disturbances of the intestinal tract (especially loss of appetite and vomiting) and to these are soon added the sequelae of the increasing anaemia —weakness, dizziness, palpitation, dyspnoea etc. The face exhibits a yellowish tint, characteristic of the disease. The mucous membranes are waxy and the sclera has a peculiar glistening appearance, The blood is bright red while the corpuscles are pale and granular. Leucocytosis is found, especially in those cases where Charcot-Robin crystals are present in the feces. The haemoglobin is greatly diminished. The urine shows albumen in rare cases.

Unless proper and prompt treatment is carried out, or a spontaneous cure results, the ultimate outcome of the constant loss of blood is general marasmus and death.

As far as the special morbid changes in the eye are concerned, I have been able to demonstrate that from 7-8% of all patients show affections of the fundus oculi. My observations extend over 180 patients, all of whom had the characteristic symptoms of Ankylostomiasis.

No especial importance was attached to the appearance of the fundus due simply to the great anaemia—such as more or less pale color of all the capillary vessels, diminished calibre of the arteries and their occasional pulsation under normal intraocular pressure, a tortuous course of the veins, and often a porcelain-colored appearance of the papilla, such as is seen in the eye after death.

The hemorrhages in the fundus, similar to those already described by von Biermer in pernicious anaemia, are the most characteristic signs. According to my observations these occur more frequently and at an earlier stage of the disease in the peripheral parts of the retina than near the papilla or the macula. They are often in groups, dotted, and lie close together without being confluent. Occasionally, they precisely follow the course of the vessels and seem to be situated in the sheaths of the latter, thus forming striated hemorrhages which accompany the vessels almost to the papilla and frequently render their contour indistinct.

In addition to these signs we find in serious cases extensive hemorrhages into the retinal tissues. They are of the size of the papilla or even larger, and present irregular edges. I have seldom had occasion to notice the peculiar hemorrhages frequently found in leukaemia and scurvy, in which a whitish spot is found in the centre of the hemorrhage, indicating a beginning resorption. On the other hand, I could usually distinguish the regularly occuring fatty degeneration of the bloodspot, which showed the well known typical picture. I have never seen the stellate appearance of the macular region characteristic of retinitis albuminurica. As already mentioned above, the urine contained albumen only in very rare cases.

Postmortem examinations reveal the peculiar changes in the fundus with even greater distinctness than does the ophthalmoscope, the bright red blood-spots being very conspicuous in the pale yellow background of the retina. The microscope shows sclerotic and fatty degeneration of the intima of the blood-vessels. The same condition is found in the endocardium and larger vessels, and in the mucous membranes and other tissues of the various organs of the body similar hemorrhages are detected. These phenomena are analogous to those described in 1894 by Natanson and in 1895 by Tschemolosow in four typical cases of pernicious anaemia caused by Bothriocephalus latus. In these cases the blood extravasations were grouped about the papilla and the macula and had also caused aneurysmal herniae as a result of rupture of the adventitial sheath of the vessels.

The disturbances of vision are caused not so much by these retinal changes as by the constitutional condition. When, however, the extravasations occur in the region of the macula a scotoma is likely to result. In most cases in which I could detect extensive alterations in the fundus the patient had no intimation of the pathologic condition of the eye.

Accomodative weaknesses, inability to use the eyes any length of time and other forms of asthenopia are, on the other hand, readily noticed. Slight, intermittent paresis of the extrinsic and internal eye-muscles, with double vision and vertigo, is likewise a not infrequent occurrence, and where predisposing conditions, such as working in collieries are present, nystagmus is a common complication.

Furthermore, we observe a retinal weakness in consequence of the anaemia and malnutrition, evidenced by photophobia and hemeralopia, a condition often found in this part of the country during the Easter fast-days. In these cases we notice a slight concentric contraction of the field of vision, especially after a long-continued examination of the eyes. Emigration of the parasite into other organs has not been so far demonstrated, because favorable conditions for further development are present in the intestines only. The parasite cannot possibly occur, therefore, as an entozoon in the eye.

It is still a moot question what gives rise to the peculiar changes in the fundus, such as we notice in this disease and in pernicious anaemia. It is doubtful whether the great loss of blood and the constant drain from the intestinal tract can alone account for them, especially when we remember that in similar acute and chronic hemorrhages from other causes no such retinal alterations occur. Even in excessive anaemia and chlorosis we do not find analogous degenerations. It is very probable that one must look for the causative factor in the toxic products introduced into the body by the parasite. In like manner we must explain the fatty degeneration of the retinal fibres, with or without hemorrhages, that is observed in the cachexia of cancer. Whether these toxins, as Fischer believes, are contained in the Charcot-Robin crystals, future investigations must decide. It is a fact that these crystals are found most abundantly in those sections of intestine that contain the largest number of worms. If the above theory be correct we may also assume that the toxins destroy the red corpuscles and are responsible for the formation of eosinophile cells (according to Leichtenstern, as high as 60%) which in turn give rise to blood extravasations.

As for the therapy I may state that the disease is fortunately readily amenable to treatment in all cases in which the anaemia or cachexia has not become too marked or has not lasted too long. A positive cure can be brought about by the administration of 10 grams of *Extract. filicis maris recente paratum.*

It is interesting to note that during the process of expulsion of

the worms, the males are expelled sooner and in greater numbers than the females. This may possibly be explained by the fact that the males change their location more frequently (for purposes of copulation) while the female is more likely to remain fixed to the intestinal wall.

It is, finally, important from the standpoint of diagnosis to note that the ophthalmoscope demonstrates positively the differences between changes occurring in chlorosis and simple anaemia and those brought about by the so-called pernicious anaemia dependant upon the presence of infectious parasites.

THE SIMPLE EXCISION OPERATION FOR PTERYGIUM, WITH A NEW INSTRUMENT.*

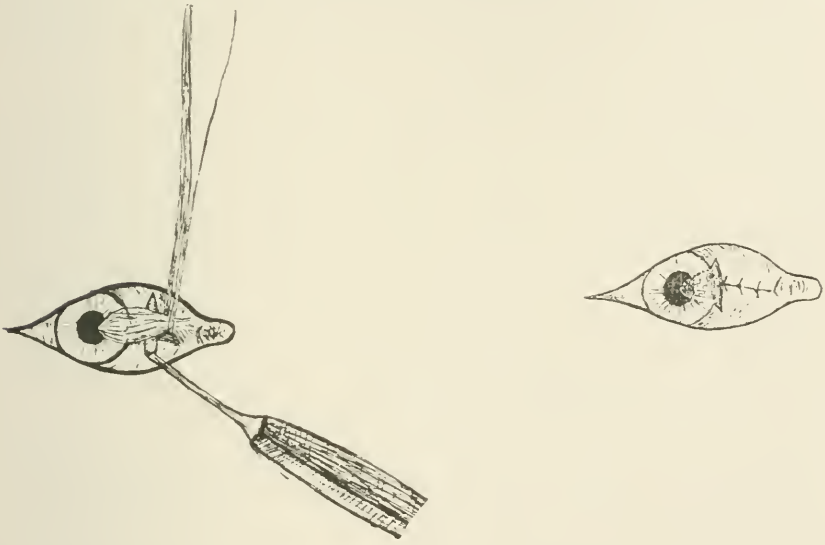
By G. MELVILLE BLACK, M. D.
Prof. Ophthalmology and Otology, Gross Medical Coll.
DENVER.

This little instrument that I present I am informed was used in the Wills' Eye Hospital, Philadelphia, some years ago as an iridectomy knife. My attention was first called to it by Dr. Wm. C. Bane of this city who had one in his possession. As soon as I saw it, it occurred to me that it would be a handy instrument to use in the removal of pterygia. In looking over Tiemann's catalogue I found an instrument listed as Agnew's Iridectomy Knife, which was nearly this shape, only it was about three times as large. I sent to Tiemann & Co. and had them make for me the instrument you see before you.

I operate, by simple excision, with this knife in the following manner. Having cocainized the eye the pterygium is seized at about its middle with a delicate pair of mouse-toothed forceps and lifted up and away from its underlying attachments. The point of this little knife is then passed from above downward or from below upward underneath the pterygium just a little to the corneal side of the forceps. Then with the side edge of the blade the pterygium is severed up to its corneal attachment. The head of the growth is removed from the cornea by prying it loose with the edge of the knife and by some cutting. The knife or scissors can be used to complete the excision of the pterygium from its base by continuing the incisions above and below toward the caruncle until they meet at the latter. If the cornea, where the growth was attached, is not clean it can be scraped with the edge of

*Read before the Denver and Arapahoe Medical Soc. Oct. 12th-'97.

the knife. The ellipitical opening which is left in the conjunctiva is to be closed with from two to three sutures. Before introducing the sutures I dissect up the conjunctiva above and below so that it will meet without too much tension. To prevent the over-riding of the conjunctiva on the cornea, where it is raw from the removal of the head of the pterygium, and where the conjunctiva would be liable to become adherent, I make two little cuts above and below in the conjunctiva running from the corneal margin supra-nasally and infra-nasally. If the first suture is placed in the conjunctival points formed by these



two cuts there will be a little bare spot, after the suture is tied, lying between the margin of the cornea and the conjunctiva. This is desirable because otherwise the over-riding of the conjunctiva on the raw cornea is liable to result in attachment of the former to the latter with resulting nonsuccess from the operation.

I have always performed the simple excision operation for pterygium. So far it has never failed me. Where there has been a tendency to recurrence I have always been able to check it by cauterizing the apex of the growth with the actual cautery.

I am very much pleased at having discovered this knife. It renders the operation very much easier of performance, almost bloodless, entirely painless and its performance, attended with scarcely any traumatism to the eye.

A BRIEF REPORT OF TWO CASES.

By W. S. SIMS, M. D.

A member of the Mississippi State Medical Association.

Meridian, Mississippi.

Case 1st.—July 1896 Mr. G. age 72 years, applied to me for an operation for cataract. After making the incision there was a partial protrusion of the iris and according to my usual custom, when this happens, I proceeded to do an iridectomy. After I had taken hold of the iris with the forceps and was about to withdraw it a slight twitching of the muscles of the face was noticed. Thinking it was the result of a slight pain, that sometimes accompanies this part of the operation I held on to the iris and was just going to say "keep quiet" when he suddenly sneezed. In his effort to suppress the sneeze and my short notice of what was going to happen, I failed to turn loose and to my great astonishment I found I had removed the entire iris.

The anterior chamber was instantly filled with blood and continued to refill regardless of all efforts to control it which forced me to complete the operation with all view of the lens obstructed by the hemorrhage. The usual antiseptic dressings were applied and a very guarded prognosis given but contrary to all hopes of a successful termination of the case, the eye recovered without a bad symptom, and the blood was slowly absorbed, so much so that in about six weeks he was able to count fingers. Two weeks later, with the aid of glasses, he was able to read small type.

There is now a ring like deposit, I suppose to be lymph, around the central opening. The sneeze was accounted for by removing his shoes while on the table placed near an open window, for the operation.

Case 2nd.— Miss H. age 35 consulted me March 10th, of this year for an examination of her eye. She gave a history of a slight nodular elevation* that appeared upon the outer and upper lid border of the right eye about six years ago. It attracted but little attention until about one year later, when a physician was consulted, who prescribed an ointment that seemed to afford relief for a time only, when it reappeared. This time the ointment failed to give the desired result. An other physician was consulted who removed a portion of the lid by an operation which effected, as she thought, a permanent cure, but returned as before within a few months. She next consulted a "Cancer Doctor," who treated her with caustics. This was attended with intense pain and followed by a more rapid progress of the affection.

At the time I saw her a greater part of the upper lid was destroyed and the lower lid and ball were also invaded, I explained to her the malignant nature of the trouble and rather discouraged an operation. But she urged me to do something to relieve her present sufferings and with a perfect understanding as to results that might follow I did March 11th, with the aid of Drs Blanks and Gulley of this city, the following operation: I first removed the ball which was found to be intensely hard. I then made a curved incision beginning at the inner angle, extending it to about one fourth of an inch beyond the outer angle including every thing, even the lachrymal gland, up to the lower edge of the brow.

A similar incision was made, except that only about half as much tissue was

*No microscopic examination was made

included to remove the lower lid. These incisions were extended very deeply, including the conjunctiva and almost the entire contents of the orbital cavity. The edges of the wound were now brought together with deeply inserted sutures. The healing was perfect and a more beautiful result I have never witnessed. The brow at first drawn down, has at this writing resumed its natural position and the slight depression in the orbit gives to the patient not an unsightly appearance.

I am in receipt of a letter dated April 14th, 1897 from Dr. W. W. Hamilton of Brooksville, Miss., whose care she is now under and who writes me as follows: "I think the operation a beautiful success. The closing of the orbital cavity in toto seems rather novel, but I think it far preferable to leaving it open in this case and if you succeeded in removing all diseased structures the trouble will be less likely to return than if the wound had been left open."

The only excuse I have to offer for reporting the two above cases is the very unusual accident in the first case and the very remarkable circumstances under which it happened. It is also interesting to note the favorable termination of the case.

The point of interest in the second case, to me, is the closing up of the orbital cavity, as I have never seen it performed, and so far as I have examined the literature on the subject, I am unable to find a description of the above method.

A NEW EPILATORY NEEDLE.

By A. J. ERWIN, M. D.
Mansfield, Ohio

The usual failure of the single probe epilatory needle, to sufficiently cauterize the follicle, to prevent the reproduction of hair, has demonstrated the need of a better cautery for that purpose, and having failed to find a bipolar needle electrode fine enough to enter the follicle, I have had one made by Geo. Tiemann & Co., of which the following is a full size cut, it has a single point—instead of the usual

double one—projecting 5 m m. beyond the junction of the platinums by which it is heated, it is made short so that the hand can rest upon the part and better direct it. I introduce the needle to the bottom of the follicle before closing the circuit, the operation must be closely watched, and the needle withdrawn as soon as the effect is sufficient. I use it with my cautery battery very satisfactorily, especially in partial trichiasis and distichiasis.

CORRESPONDENCE.

Buffalo, N. Y., Oct. 23, 1897.

EDITOR OF THE OPHTHALMIC RECORD.

My dear Sir,

My attention has been called to the editorial in the September Number concerning ophthalmia neonatorum. In this are quoted the resolutions which were adopted by the Ophthalmological Section of the American Medical Association apparently criticising them sharply because they did not advocate the universal use of the Credé method. It is said in italics that Credé's method now "should be applied by every person officiating at the parturient bed-side, and that it should be done to the eyes of every living infant at the time of birth as universally as is the ligature applied to the umbilical cord or the first bath to the body."

This is all very well from the standpoint of the doctrinaire. Unfortunately, however, there are too many who do not agree with this. When a resolution similar to that referred to, was presented at the American Ophthalmological Society it could not be passed at once but was referred to a committee for further consideration. If such conservatism can be found in that society, it is not surprising to see a large number of general practitioners ready to oppose any "compulsory medication" with all the strength of organized ignorance. The gist of the matter is that whatever ophthalmologists may think of the necessity of Credé's method it is probably unconstitutional and practically impossible at present to enforce it in private practice. But on the other hand the state, like any individual, has the right to dictate how those under its care shall be treated—and if the method can be made compulsory for public institutions, the good effects there will show that it is malpractice to omit it elsewhere. That seems the best way to teach the profession, as well as the laity.

Very truly yours,

LUCIEN HOWE, M. D.

Ithaca, N. Y., Oct. 30, 1897.

TO THE EDITOR OF THE OPHTHALMIC RECORD.

Dear Sir:

In the August No. of your Journal on page 441, Dr. Melville Black of Denver, Colorado, casually writes. "I am inclined to think

that too many of us are afraid of strong solutions of nitrate of silver, whereas if the reverse were true, and solutions of silver from forty to eighty grains to the ounce were used as above described early in gonorrhoeal ophthalmia we should not have occasion to look further for another abortive agent."

I thoroughly concur with Dr. Black in this belief except that I know from my experience with the last seven cases, since 1894. Prior to that time, I used the weaker solutions combined with cleansing with antiseptic solutions, antiseptic salve and iced cloths also atropia or eserin as indicated, as described in the text books at my command, and in almost every case I lost one eye almost entirely, with its fellow badly damaged with a leucoma. The above results are perhaps painted blacker then they really were, but suffice it to say I became disgusted and resolved that in succeeding cases I would try stronger solutions which I did and was very much pleased with the result. With both infants and adults I now use at the onset a sixty grain solution carefully applied to the everted lids allowing the caustic effect of the drug to become well established before using the saline solution, then using the other treatment described in the text books as indicated. I have now treated seven cases in all by this method and in most of them I have not been obliged to repeat the seemingly savage dose, the duration of treatment has been very much shortened and constantly under complete control, and in not a single one have I lost an eye or had the slightest corneal disturbance. In all there were no after effects to the lids. I believe it to be our only abortive remedy.

Yours truly,

JOHN S. KIRKENDALL, M. D.

REVIEWS

In the *Medical News* of May 8th, Charles Stedman Bull, M. D., of New York has a interesting paper on **"Lesions of the Retinal Vessels, Retina and Optic Nerve, Associated with Gout."** Speaking of gouty retinitis and forms of neuroretinitis due to the pathologic condition of the blood in gout, he calls attention to a strong resemblance to certain types of syphilitic retinitis, "and which may or may not be accompanied by retinal hemorrhages and opacities of the vitreous humor."

The retinal hemorrhages of gout he attributes to the general well known "venous obstruction, and irregularities of the circulation—great arterial pressure and relaxed condition of the vascular walls.

He enumerates the effects of the poison of gout on the vascular system, as: (1) a high blood pressure in the arteries. (2) hypertrophy of the left ventricle; (3) hard, incompressible arteries undergoing atheromatous degeneration."

He speaks interestingly of Thoma's investigations along the line of inherited tendencies of certain gouty families to arterial degeneration and then immediately says: "We now recognize the fact arteriosclerosis is caused by some general disturbance of nutrition, which is partly the result of infection, intoxication and other pathologic lesions as yet but little understood, and partly the accompaniment of senile changes." However his discussion of the changes produced in the blood and resultant obstruction of circulation in the capillary system, which in turn directly changes not only the blood current but the coats of the vascular system as well, deserves more than passing notice.

"Whenever the current is slow, the middle coat of the artery usually contracts, and when this does not occur, a new growth of connective tissue is developed in the tunica intima, which thus reduces the arterial calibre. The muscular coat of the artery first becomes involved, and the loss of elasticity permits the artery to dilate. As a result the blood currents becomes slow, the vasa vasorum are distended, and a new growth appears in the intima, and is followed by the same process in other coats. A similar condition is met with in the veins, and in fact, the phlebosclerosis or endophlebitis may precede the endarteritis sometimes by a lengthy period."

After briefly reviewing the statements of Gauté, Lychon, Hutchinson, Gowers, Galezowski and Wagemann, Dr. Bull draws the fol-

lowing conclusions relative to changes produced in the walls of the blood vessels of the retina, choroid, optic nerve etc. etc:

"(1) The changes in the fundus are always bilateral, though rarely symmetrical in the two eyes. The lesions may begin simultaneously in the two eyes, but this is by no means always the case. (2) The degenerative changes in the walls of the blood vessels, both arteries and veins, are at first very minute, and are often overlooked. They must be carefully searched for, as they begin in the intima. (3) The general angiosclerosis, and the patchy exudation in the retina, cause marked impairment of central vision, but little impairment of the peripheral vision, and the disease never ends in blindness. (4) The loss of central vision is always progressive up to a certain point. Improvement of the vision, after the retinal disease is established, cannot be expected, though in favorable cases the existing vision may be maintained. (5) Hemorrhages into the retina are rare except in the comparatively early stages of the disease. When the vessels lose their elasticity by reason of the increase in the thickness of their walls, due to the deposits, the vessels become stronger and more rigid, and hemorrhages are no longer to be feared. (6) The most marked feature in the ophthalmoscopic picture is the development of the angiosclerosis in the vessels of the retina. This condition is confirmed by the microscope, and is seen to extend to the vessels of the optic nerve and choroid. (7) Another almost equally marked symptom is the peculiar yellowish granular exudation in the retina, located by the ophthalmoscope around the posterior pole of the eye, and generally leaving the macula intact until late in the course of the disease. This exudation is shown by the microscope to be mainly in the nerve-fibre layer, though found in all the layers except that of the rods and cones. (8) The changes in the optic nerve-fibres seem to be generally intra-ocular, but have been traced occasionally for some distance back of the eyeball." The rare opportunity of making several postmortem examinations, after having observed the pathologic changes in the retinal vessels, retina and optic nerve in life, has aided the author in arriving at fixed conclusions, which are both very interesting and instructive.

A. W. CALHOUN.

REPORTS OF SOCIETIES.

CHICAGO OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY.

Regular meeting was held November 9th, 1897, Dr. Montgomery in the chair.

Dr. Norval H. Pierce opened the discussion on Chronic Suppurative Otitis Media as follows: He said that a proper comprehension of the factors involved in the treatment of chronic suppuration in the middle ear may best be arrived at by briefly considering; (1) the pathologic processes which induce suppuration in the tympanic cavity, comprising the microorganisms involved; (2) routes of invasion, and (3) the conditions which prevent their escape, or destruction. These three points were discussed seriatim.

In considering the treatment, he had come to believe from experience that many cases of catarrhal inflammation assume a suppurative or chronic form because of ill advised treatment. One of the most prevalent errors in this regard is the empirical and illogical use of ear drops, douches and inflations. The author showed that this was bad treatment. The first condition to be met in chronic, as well as acute otitis media, whether suppurative or catarrhal in form, is drainage. There is no other factor which tends to perpetuate a suppurative ear disease so frequently as lack of drainage or retention of discharge. At his clinics he rarely uses injections. The ears are cleansed by carefully swabbing away secretion by means of sterilized cotton pledgets. These pledgets are kept constantly on hand. The external auditory canal is then packed with a strip of sterilized gauze, care being taken that it barely touches the membrane.

With reference to douching, Dr. Pierce said there are a few cases which demand irrigation, and in these the ear is cleansed through the Eustachian tube whenever possible. When the affection is bilateral he uses Gruber's method. A syringe with a blunt point, holding two ounces, is introduced into the nostril. The other nostril is closed by the thumb as in Politzerization. The patient is told to blow out the cheeks forcibly when the contents of the syringe are forcibly ejected. In this way the solution, by way of the Eustachian tubes, enters the middle ear, and then through the perforations in the tympanum finds exit into the external auditory canal.

Surgical Treatment. When the discharge continues after a months treatment by the method described, the author resorts to operative interference, providing there is no indication of polypoid formation or caries. In the case of a polypus being present he snares it away immediately, or in the case of opposition to surgical interference on the part of the patient, he reduces it by means of sesqui-chloride of iron or alcohol. In his hand syringing of the attic by means of Hartmann's canula has proven unsatisfactory in almost all cases

Dr. Pierce then touched upon a few practical points that had been impressed upon him through his own experience in the surgical treatment of otitis media suppurativa. As regards narcosis, a general anesthetic should always be used in those cases where any considerable amount of the membrane remains, for the pain is usually intense during the operation, and hemorrhage from the granulations is very likely to delay manipulation. Cocaine may be relied upon in those cases where the tympanic membrane is largely destroyed and where granulation tissue is nearly altogether absent. The attic can be best cleaned by the attic scoop. The after-treatment should be the same as that pursued before operation, namely, packing with gauze drains. He had seen numerous cases that have run along for twelve years or more in which suppuration ceased in two months after the operation.

Dr. Dickerman referred to the varying susceptibility of different patients to middle ear disease and gave great importance to the condition of the nasal pharynx in these cases. He had found that in cases where the Eustachian tube was blocked by nasal growths, that ear disease was far more common. Regarding treatment, he agreed with Dr. Pierce that the dry method was by far the best and he believed that acute cases would never become chronic if properly treated. The bone in which necrosis most often takes place, is the incus because the blood supply is entirely from one small artery which is easily occluded, any slight pressure from swelling being sufficient. In these cases of necrosis a thorough curetting is absolutely essential and due care must be taken of the facial nerve which is easily injured by instruments or escharotics. He had found that the improvement in hearing in most of the cases was marked.

Dr. Henry Gradle: A fair experience has shown me that the gauze drainage advocated by Dr. Pierce is the speediest treatment at present known in acute inflammation of the middle ear. But, I have never used it as yet in the chronic form. In discussing the treatment

of chronic suppuration of the middle ear, I wish to emphasize certain principles which I fear are not yet appreciated by all practitioners. In general surgery it is well known that the tissues will invariably recover from pyogenic infection if the pus can escape freely, and there are no unfavorable conditions present, as for instance, foreign bodies. The same is true of inflammation of the middle ear. For anatomical reasons there is, however, much liability to the damming up of the pus with consequent persistence of suppuration. The reasons are partly the obliquity of the meatus, partly the complex architecture of the tympanic cavity, the liability to the formation of occluded crevices, by swelling of the mucous membrane or granulation tissue, and particularly the partial occlusion of the attic by adhesions and newly formed bands of tissue. All these conditions interfere with free drainage of the pus, and thereby favor secondary infection with putrefactive bacteria from the meatus. Inspissated pus, moreover, acts as a foreign body, and thus maintains continued suppuration.

A valuable sign of retention of pus in the cavities of the middle ear is its odor. Freely escaping pus has no fetid smell, while a foul odor indicates imperfect drainage. We can make use of this important criterion to test the efficacy of treatment. On the basis of continued study of such cases I can state emphatically that any treatment which does not remove the odor will never lead to a cure of chronic purulent otitis, and that conversely, whenever the odor has been removed the tendency to recovery can be at once observed. A small number of cases may not entirely heal under the treatment which removes the odor, but this is a rare exception. On the other hand, the the first principle stated has no exception whatsoever.

My treatment always begins with the free use of the syringe. A fine nozzle protected by a bit of soft rubber tube must be carried far into the meatus. Thorough syringing alone cures many cases. I can say this on the basis of some cures accomplished by syringing followed by the experimental use of various powders like iodoform, which I have since learned to be absolutely inert. But syringing will not cure all cases, nor is it the speediest form of treatment when employed alone. All uncomplicated cases of marked purulent otitis will heal under the use of boric acid lightly insufflated. In a small percentage of instances a single insufflation has resulted in a permanent cure. If the cure is delayed there are complicating conditions present which we must inquire into, and which can not be better treated by the use of the various substitutes recommended for boric acid at various times.

What we wish to accomplish by insufflation is to put into the ear a deposit of a non-irritating antiseptic which checks bacterial activity on the surface of the tissues. Boric acid answers these requirements so fully that I can see no reason for any search for substitutes for it. The addition of any antiseptic fluid to the water used for syringing appears unnecessary to any one familiar with surgical pathology, and many trials in former years have convinced me of the utter uselessness of all fluid antiseptics (including peroxide of hydrogen).

Insufflation through the Eustachian tube I formerly used as a routine method, but I have failed to see the least delay from its omission.

If these measures do not remove the odor after one or two treatments, other means must be adopted. Irrigations through the Eustachian canal has not proved of any use in my hands for the purpose of removing pent up secretion or inspissated pus. I have learned to regard, however, as very valuable, irrigation of the tympanic cavity and attic through the intra-tympanic canula. Hartman's rubber tube is too thick. I use a silver tube, closed at the end, but with lateral eye, attached to a (ten gram) piston syringe. Its efficacy is shown in suitable cases by the appearance of numerous pus collections in the basin, and the disappearance of the odor. It is often painful to the patient, but I have never seen any harm done by its use. Intolerance of the patient may require a repetition of its use at different sittings until all odor is removed.

In some instances, in which no complicating lesions existed, but where the intratympanic canula failed to dislodge the retained pus, I have made use of fluids capable of penetrating better into the small crevices than water on account of their lower surface tension. I use first a solution of salicylic acid in alcohol and ether, and follow this by carbolic acid in glycerin, one in ten. A number of times my reasons for the employment of the solutions were justified by the subsequent disappearance of the odor and the progress of the case. I have also made attempts to dissolve carious bone by baths of hydrochloric acid (five per cent.), and to digest obstructing granulation tissue by acid pepsin solutions, but am not convinced that I have ever accomplished anything thereby. If these modes of treatment fail to remove the odor, we must attack surgically those conditions which interfere. Polypi must be removed, although small ones may sometimes disappear by absorption under such treatment without delaying the cure. Visible granulation tissue is to be curetted. Carious bone must be cleansed by the curetting of adherent fragments of tissue; but when

cleaned it does not interfere with recovery as I have learned repeatedly. Small openings in the membrana tympani, or in Shrapnell's membrane, may be enlarged, although I have but rarely seen any benefit from this procedure. When persistence of the odor indicates the inefficiency of the treatment, I attempt to clear out with the snare and curette the entire intratympanic cavity, removing as much as possible of the ossicles, so as to expose the attic freely. I have, however, not concluded to do a simple Stacke operation for the reason that Stacke himself found that in most cases requiring his operation, the mastoid is involved. Whenever, therefore, I find that I can accomplish nothing by the minor surgical measure I perform the Zaufal operation, and convert the antrum, tympanic cavity, attic and meatus into one cavity.*

As a rule, otorrhoea diminishes steadily until cured, after the odor has been removed. There are, however, a few rare cases where many months may be required for this result. Generally, the treatment will not extend over a longer period than four to six weeks at most. There are some cases in which no odor is present when first seen and which still proves very rebellious to treatment. They are characterized by a very profuse, stringy, muco-purulent secretion which presumably comes from the mastoid antrum.

In those instances of this kind in which there are no indications for naso-pharyngeal treatment I have often found it possible to influence the secretion very markedly by the use of tannin dissolved in glycerin (one in four), retained in the ear for hours. Repeated trials have shown me the efficacy of this treatment under these conditions, but it is not infallible. Some of these cases with profuse, stringy secretion occur in children with a similar profuse chronic purulent rhinitis. This disease has been described by Bosworth as a special type occurring in children, and I can confirm his description fully, but must differ radically from him regarding its ultimate outcome. He considers it the first stage of ozena. I cannot admit this at all as I have watched some of these children for months, partly after efficacious treatment, partly after treatment insufficient on account of frequent interruptions. Moreover, the few cases of ozena which I and others have been able to catch in their incipiency began in an entirely different manner. This chronic purulent rhinitis of children can be

*Of all complications the most important is the existence of cholesteatoma. If, with this condition, the odor cannot be removed a radical operation is required. If the deodorization can be accomplished the cases generally heal, and may stay cured for months or years, but relapses rarely fail to set in.

cured by the persistent use of the nasal douche kept up for many months. The same treatment, extended into the Eustachian tube, will also cure the corresponding form of middle ear disease. When both ears are involved it is easy to use the Politzer bag, filled with saline solution, instead of air. When the disease is one-sided the more cumbersome Eustachian catheter must be employed. With such irrigation boric acid insufflations must be combined.

It may not be amiss to add that hypertrophy of the pharyngeal tonsil is not only a frequent cause of inflammation of the middle ear, but accounts also for many relapses observed in childhood, and that in every case of chronic otitic suppuration we must attempt to maintain a normal condition of the nose and pharynx.

Dr. Tilley is a firm believer in syringing in these cases and thought it of more value than the dry method of treatment. He uses a bulb syringe similar to the one used by dentists and injects the fluid into the tympanic cavity. He finds a solution of carbonate of soda most valuable. He considers constitutional measures of the greatest importance and uses the solid iodide of iron and cod-liver oil in nearly all his cases. The nasal condition is also carefully looked after.

Dr. Wheelock agreed with Dr. Gradle that the odor of the discharge is a good index to the conditions of the ear. He syringes most of his cases with peroxide of hydrogen allowing it to remain in the ear for some minutes. Where granulations are present he finds that they can be most comfortably removed with absolute alcohol. He has been recently trying a one-half per cent. solution of formalin instead of the peroxide and finds it very satisfactory. It seems to have a more penetrating effect than any other solution. Patients are instructed to syringe the ear at home with two quarts at least of hot water by means of a fountain syringe held a few inches above the level of the head.

Dr. Colburn uses peroxide quite frequently, but called attention to the dangers of using it in cases with perforation because of the pressure exerted by the gas in the middle ear.

Dr Coleman also uses peroxide freely. For some time he has been using the Politzer method of inflation in combination with cleansing the ear and considers it very satisfactory. He does not think there is any danger of reinfecting the ear from such treatment. When granulations are present he destroys them with chromic acid.

C. P. PINCKARD.
Secretary.

SECTION ON OPHTHALMOLOGY.

College of Physicians of Philadelphia.

Meeting, October 19, 1897. Dr. George C. Harlan in the chair.

Dr. G. E. de Schweinitz read a paper on *Amblyopia in Horses*, probably due to the toxic influence of tobacco, as described by Dr. James W. Barrett, of Melbourne, Australia. Through the courtesy of Dr. Barrett he was enabled to exhibit to the Section two slides which Dr. Barrett had prepared from the optic nerves of a horse which had become blind, owing, it was supposed, to the consumption of some plant, probably the Australian tobacco plant. One of these sections, originally stained with carmine, had been removed by Dr. de Schweinitz from the slide and re-stained by the Weigert method. The section was composed of about one hundred nerve bundles, some of which showed distinct signs of disease, namely, a species of fibrosis which separated, pressed upon, and destroyed the individual nerve fibers. This was a marked phenomenon in several of the bundles and less apparent in others. The Weigert section confirmed, in large measure, the observations already made by Dr. Barrett, who also found atrophy of the nerve fibers, but who did not describe abnormal development of connective tissue. It appeared exactly to coincide with the observations of Dr. Tidswell, who described the condition as one of progressing fibrosis with some degeneration of the nerve fibers.

Dr. de Schweinitz also read a paper on *Blood-vessel Formation in the Vitreous*. He described the ophthalmoscopic appearances of the left eye of a man, aged 26, as follows: The optic disk was a vertical oval, of somewhat pallid color, and springing from it there was a greenish-white mass of the type usually seen in proliferating retinitis, which carried a veil of anastomosing blood-vessels and terminated in several clump-like, dark bodies, one extending forward into the vitreous 7 D. Similar patches of greenish-white connective tissue, supporting similar congeries of blood-vessels, were visible above the disk, above the macula, downward and inward along the course of the inferior nasal vessels, and directly below the disk. These masses varied in prominence in the vitreous from 3 to 7 D. The patch above the disk was in immediate connection with an area of retino-choroiditis, and some of the blood-vessels could be traced directly to this patch. No direct communication with the fundus could be seen in the other masses. The patient's vision was normal and, in general, the vitreous clear. The only probable etiological factor which could be discovered was an uncertain history of syphilis, although a careful examination

by his family physician had failed to reveal secondary symptoms involving skin or mucous membrane. The treatment had consisted of a thorough course of mercurials and iodid of potassium, which, however, had produced no visible effect upon the retinal lesions.

Dr. de Schweinitz described the various theories which had been advanced to account for the development of connective tissue in the vitreous, associated with the formation of blood-vessels, and thought that the one which ascribed them to the result of hemorrhages was the one that had most to commend it.

Discussion.—Dr. G. C. Harlan showed the picture of a case of extensive vascular growth in the vitreous, reported at the meeting of the American Ophthalmological Society in 1889. A beautiful vascular network forming a delicate membrane extended into the vitreous from the disk where the larger vessels arose. These vessels subdivided rapidly and ended in capillary loops best seen with + 4 D. The vitreous was clear within the meshes of the membrane, which nearly disappeared from view when the fundus was focused. There were repeated retinal and vitreous hemorrhages. Two years later most of the smaller vessels had disappeared, and many of those remaining were empty.

Dr. Harlan also referred to a case of repeated hemorrhage, from which Dr. Theobald, of Baltimore, had the opportunity of watching the growth of a somewhat similar vascular membrane.

Dr. P. N. K. Schwenk spoke of a case in which a similar vascular tumor had grown from the optic disk. Small hemorrhages were detected in its periphery.

Dr. Edward Jackson referred to a case previously shown before the Section, in which repeated hemorrhages through some months had each been followed by an outgrowth of vessels into the vitreous in the region of the hemorrhages.

Dr. B. A. Randall had seen a case of similar fibrous development from the disk without vessels.

Dr. S. D. Risley reported a *Case of Ocular Disturbances from Injuries to the Head.* He made a preliminary report in a case of blindness in the left eye, with marked swelling of the optic nerve, a recent hemorrhage at the macula, floating vitreous opacities, and an extensive detachment, probably of both choroid and retina, throughout a large portion of the lower half of the eye-ground. There were, also, in the upper temporal quadrant of the fundus, radiating gray-white streaks, one of which resembled the late appearance after rupture of the cho-

roid, and others appeared to be folds of detached retina. The changes had followed a blow received one year before with a baseball bat on the left side of the head, anterior to the ear. There was no sign to indicate the exact location of the impact. He was rendered unconscious by the injury, and remained under treatment for three weeks. He now has frequent convulsive attacks affecting the right side, which begin in the toes of the right foot, rapidly ascend the leg to the right arm, ending with twitching of the left side of the face and severe occipital pain. This case forms the last of a series of five cases that had come under Dr. Risley's notice, in which blindness in one eye had followed blows or injuries to the anterior portion of the skull. Case I was that of a young child who had fallen, striking the left infra-orbital ridge. In three weeks atrophy of the left optic nerve had commenced, which became complete with total blindness in the left eye. There were no hemorrhages or other ocular changes. Case II was that of an elderly man who had commencing atrophy of the optic nerve with whitish splotches and gray infiltration in and around the macular region, following a severe blow on the outer angle of the left supra-orbital ridge. The atrophy became complete. There were no hemorrhages in the eye-ground and no detachment of the retina. Case III was that of a man who was struck by a falling timber on the anterior part of the top of the head, which felled him. A short time after he complained of failing vision in the right eye. There were fine granular changes with slight gray infiltration in the macular region and incipient atrophy of the optic nerve with some contraction of the visual field. Both the contraction of the field and the atrophy progressed for some weeks and then became stationary, resulting in a marked and permanent impairment of vision but not in total blindness. Case IV was that of a farmer who was struck in the left temporal fossa by a steel tooth of a horse-rake. The temporal plate of the orbit was probably fractured. Two months after the injury there was well advanced atrophy of the optic nerve with only qualitative perception of light and the remains of extensive absorbing hemorrhages throughout the eye-ground, large white patches here and there, and a partially absorbed hemorrhage at the macula.

The mode by which this class of injuries causes blindness furnishes an interesting subject of inquiry. The changes in the fundus suggest, in some cases, thrombosis, but this condition does not explain those in which the blindness ensued from simple atrophy of the optic nerve. The supposition of injury to the nerve caused by splinters of

bone from fracture of the orbital plate, or by pressure in the foramen at the time of the blow, or by post-ocular hemorrhage, is plausible. It is also possible that a thrombosis, if present, may have been produced by direct injury to the nerve. In the case reported before the Section in the spring of the present year, where total blindness followed the discharge of a gun near the side of the head, from detachment of the lower half of the choroid and retina, as in the case reported to-night, blindness gradually ensued from optic-nerve atrophy as a sequel to, probably, retro-bulbar hemorrhage.

Discussion.—Dr. Jackson had seen a case of injury of the brow with extensive hemorrhage into the orbit, which had caused protrusion and complete immobility of the eyeball, with absolute blindness within 48 hours. During the first few days no intra-ocular lesion was detected, except a very marked gray opacity of the retina with swelling. As this subsided, choroidal disturbances were found throughout the fundus with extensive hemorrhages in the upper-inner portion. The choroidal changes went on to atrophy and pigment absorption, and the eye remained blind, but regained almost normal movements.

Dr. de Schweinitz reported the case of a girl who fell, striking her head, and was found partly unconscious. A day later she complained of blindness. The right retina was bluish-gray with no interruption of the retinal circulation. In a few days the retinal haze disappeared and was succeeded by choroidal changes and complete blindness with white optic disk. The lesion in all probability was a hemorrhage in the sheath of the optic nerve.

Dr. George Friebis reported the case of an old lady who lost the sight of one eye a few days after receiving a slight blow on the head. The fundus was studded with hemorrhages.

Dr. Edward Jackson read a paper on *Auto-Skiascopy*. This requires the usual apparatus for skiascopy and a looking-glass. In this glass is seen the reflected image to which, as to a patient, the surgeon applies the test. One eye is used to study the refraction of the other. Since the image is as far behind the looking-glass as the surgeon is in front of it, the distance from the surgeon's eye to the observed eye is double the distance from the looking-glass.

For the plane mirror the light is brought close to the observing eye, and far enough to one side to leave the observed eye in the shadow of the nose. For the concave mirror the source of light should be placed at least one meter behind the looking-glass, far enough to one side to allow it to shine on the mirror in front of the observing eye,

but so as to leave the observed eye in shadow. The two eyes having to take the different rôles of observing and observed, proves somewhat puzzling at first; but when more familiar with the test, the observed eye is of positive assistance in keeping the light properly directed, since it sees in the looking-glass the reflection of the mirror held before the observing eye. In auto-skiascopy the refraction is not measured at the fovea, but at a point somewhat to the temporal side of the macula. The value of the method, both to gain familiarity with the shadow test and as a means of studying problems in physiologic optics, makes it well worth trying.

Dr. Schwenk exhibited and reported two *Cases of Rupture of the Pupillary Margin of the Iris.* The first, that of a boy, struck across the eye by a brick, showed four V-shaped nicks in the margin of the pupil, dilated to 9 mm. but contracted to 5 mm. under eserine. Vision was at first $\frac{2}{200}$, and in three days rose to $\frac{15}{20}$, after which it again declined owing to progressive opacity of the lens. The second case was that of a man struck in the eye with a corn-cob two years previously. The pupil remained one mm. larger than that of the other eye, with serration and cicatricial changes of its lower margin.

Pilocarpin in Chorio-Retinitis.—Dr. Hansell detailed two cases of non-syphilitic central retino-choroiditis, in which the disease had been checked and vision greatly improved by the injection under the skin of pilocarpin muriate, and alluded to two others that were still under treatment, in which the benefit from the administration of this drug was marked. In all the cases potassium iodid and mercury had been previously exhibited in large doses, without avail. In No. 1, vision had fallen to $\frac{20}{200}$. The patient received daily, or on alternate days, according to its effect upon the heart's action, $\frac{1}{12}$ to $\frac{1}{8}$ grain. In four weeks vision was restored to $\frac{20}{30}$ (?). In No. 2, vision was reduced to $\frac{20}{50}$, and, by the same treatment continued for seven days, was brought to nearly the full acuity. In none of the cases could a history of syphilis or other constitutional disease be obtained. Dr. Hansell's experience with pilocarpin in the above and other cases warranted his asking for the remedy a trial in the treatment of chorio-retinal inflammations, particularly in the acute form, and of opacities of the vitreous frequently associated with choroidal disease.

Dr. W. M. Sweet exhibited for Dr. Hansell a *Case Showing the Result of Puncture of the Sclera in Recent Detachment of the Retina.* The patient had, for some months, a small detachment of the superior portion of the retina, mainly of the superior artery and vein. Suddenly

three weeks ago, he lost all perception of light, excepting in a small spot in the foveal region. The retina was totally detached and the vitreous full of opacities. Two days after the blindness was noticed, an incision ½ inch long was made in the lower and outer section of the sclera and a probe inserted to separate the edges of the wound. A considerable amount of semi-fluid material was forced out of the opening by pressure upon the opposite part of the globe. The next day, vision was greatly improved and a week later, with the correction of a low hypermetropia, vision was $\frac{20}{15}$(?). The vitreous still showed some remains of hemorrhages. During the next few weeks vision varied between $\frac{20}{20}$ and $\frac{20}{15}$.

Dr. Wendell Reber exhibited for Dr. Hansell a *Case of Congenital Aniridia*, in a girl seven years of age. Vision was decidedly below normal on account of opacities in the lenses, also congenital in origin. The other parts of the eyes were healthy and showed no abnormalities. No other members of the family had congenital defects of any kind.

HOWARD F. HANSELL,
Clerk of Section.

Dr. Frank Allport has resigned from the chair of Ophthalmology in the University of Minnesota, having decided to leave Minneapolis and take up his residence in Chicago with his office, 1104 Stewart Bldg., 92 State St.

THE
OPHTHALMIC RECORD

A Monthly Review of the Progress of Ophthalmology.

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EDITORIALS.

TO OUR READERS.

The sixth volume of the OPHTHALMIC RECORD closes with the current number, and the Editorial staff look back upon the past year as the most satisfactory in the history of the journal. The promises given in the initial number have, they believe, been generously fulfilled and, as a consequence, they are able to state that contributions to the RECORD have a larger number of readers and the periodical itself a wider circulation than any similar monthly.

During 1898 the management intends to follow a still more extended program and fully expects not only to increase the circulation of the RECORD but to furnish a journal that will be even better edited, better printed and better illustrated than the issue of 1897.

GIVE THE OTHER MAN THE BENEFIT OF THE DOUBT.

Some men seem to glory in condemning the work of others. We have in Ophthalmology a field of medicine and surgery in which there are great opportunities for observing what would appear to be the results of mismanagement of cases by other oculists.

A patient comes to us with a damaged eye, the result of an injury received some months or years before. We think we see how a more favorable result could have been obtained. We do not see the conditions that existed at the time of the injury nor the circumstances surrounding it. It is so easy, by tone or manner or words, to lead the patient to think that had he come to us in the first place we could have saved his eye.

A patient who has lost an eye as a result of cataract extraction certainly has much to grieve over. While the operation may have been

performed in the most perfect manner, yet the patient holds himself in no degree responsible for results, notwithstanding the fact that he may have failed absolutely to follow instructions. The operator may feel even more keenly the unfortunate outcome of the case, at the same time believing that he performed his whole duty in his management of it. Another oculist renders an opinion months or years later, basing this opinion entirely upon the patient's statements, which are usually inaccurate. He is unacquainted with the operator's ability, but in accordance with his egotism he seeks to defame his defenseless brother-oculist that he may add to his own importance. He does not at that moment think of his own mistakes, and it is very probable that at that instant another oculist may be looking at some of his unfortunate cases with an equally good opportunity for criticism.

Some of our eastern brethren have by years of experience and favorable opportunities acquired a world-wide reputation, and some of them seem to have an idea that no good can come from anywhere outside their own metropolis. Cases are referred to them from all over the country. Many of these cases are hopeless unfortunates. The patient who has traveled far drinks in eagerly every word uttered by one of these eminent men, while he, seeing "at a glance" that nothing can be done, too often, by word or manner, forever damages the reputation of some competent oculist. The patient does not forget, but returns to his home to spread the report, possibly by that time magnified, of the unskillful treatment received at the hands of the former oculist.

Cases do come to us in which evidences of mismanagement are so apparent that it is hard to hold our feelings in check, but there are times where we can not correctly judge from the condition before us what may have been productive of it. Where it is a reasonable doubt let us give the other fellow the benefit of it.

G. M. B.

OPEN WOUND TREATMENT AFTER CATARACT OPERATIONS.

The modern management of cataract patients shows a marked tendency to make them as comfortable as possible and to do away with all unnecessary restraints. Patients are no longer shut up in dungeon-like darkness, nor are they obliged to suffer the torture of a continued recumbent position in bed; but are allowed to spend the day sitting in a comfortable chair and in a light and well aired room. The

thick, hot, flannel rollers are a thing of the past and bandages of a light and cool material have taken their place.

While we fully indorse the laudable desire to cater to the patient's comfort, we are not prepared to go in this direction as far as Prof. Hjork of Christiania, who in a recent issue of the "Centralblatt fuer Augenheilkunde" very strongly pleads for the omission of all bandages after operations upon the eyeball. His reasons are that winking serves to cleanse the eye and to carry off the micro-organisms with the tears through the normal tear passages; bandages, therefore, stopping the movements of the eyelids, favor rather than prevent the contamination of the wound. From October 1895 to 1896 he used a bandage, but during the first 24 hours only, and since October 1896 he discarded bandages altogether. During this period 112 operations by which the globe was opened were performed (extractions, iridectomies, sclerotomies, needle operations) and "in all cases the healing was favorable."

We do not doubt that the punctures of a needle and the linear incisions of a keratome heal kindly under open treatment, and even that sclerotomy wounds, unless unusually extensive, will do well without bandages, for these wounds have no disposition to gape, but close up tightly as soon as the instrument is withdrawn. But when it comes to the large curved incision of cataract extraction we hold that kind healing requires something more than the aseptic condition of the wound; it requires in addition that the accurate apposition of the wound-edges shall be protected against disturbance by winking. The edges of these flap-wounds are easily separated by the slightest pressure of the winking lids; hence, if no bandage is used the sealing up of the wound is retarded and the chances for prolapse of iris are considerably increased. Prof. Hjork proves this by his own cases; for in 24 simple extractions performed during the period of the open wound treatment iris prolapse occurred 4 times or in 16 per cent. of the cases. In other words the accident is likely to occur twice as frequently under the open treatment as under protective bandages. This is not a favorable showing for open wound treatment, and surely can not induce ophthalmic surgeons to abandon protective bandages. We would advise the bandage as the safest treatment until somebody invents a cement by which the fresh wound can be firmly sealed up directly after the extraction. Then the movements of the lids could not disturb the edges of the wound, and, of course, bandages could be safely omitted.

F. C. H.

THE ACTUAL CAUTERY AND SYMPATHETIC OPHTHALMIA.

With the fashion of doing simple cataract extractions has come an increased demand for some effective and easily applied method of treating prolapse of the iris; and perhaps the most seductive of the methods suggested is to burn away the prolapse with the Paquelin—or galvano-cautery. This is effective and easily applied; and if it were safe, there would be every reason for recommending its general use. Unfortunately, evidence is accumulating which indicates that it is not safe. Some years ago, Kalt reported a case in which sympathetic ophthalmia followed its use, and during the present year Trousseau has reported two similar cases. To these I can add the case of a girl nine years of age, who was brought to me, some years ago, with a large prolapse from a wound of the limbus made by a slate pencil. I excised the prolapse and touched the stump with the galvano cautery. Twice, in the succeeding two weeks, as there was still a little rough iris-tissue to be seen, the cauterization was repeated. The girl then went home with the eye apparently in excellent condition. She returned in about a month with vision in each eye reduced to counting fingers, and a typical sympathetic ophthalmia, which progressed, in spite of energetic mercurialization, atropine and heat, until all useful vision was permanently lost. Beside this, I have good reason to think from the report sent me, that another of my patients, a woman of 72, who had a small prolapse, after an extraction *with an iridectomy*, developed a sympathetic ophthalmia, which has practically blinded her, about three weeks after the use of the cautery.

Reasoning deductively, one would at first be inclined to regard the cautery not only as the best means of ridding a wound of germs, but as an excellent guard against subsequent infection of the tissues below the eschar. Practically, however, we find opposed to this conclusion, beside the cases just cited (which though not probably all simple coincidences, may have been such) the fact, well established among rhinologists, that actual cautery-wounds of the nose and throat are especially apt to cause severe reaction. My own impression is that cauterization with chemicals is much less likely to cause trouble. Several cases of severe meningeal disturbance from the use of the galvano-cautery in the nose have been reported, but none, so far as I know, from chemical cauterization. The fact seems to be that the tissues killed, but not destroyed, by the hot metal, form a favorable

medium for germ-growth; and also, perhaps, delay the formation of a protective granulation-surface. The difference between the results of chemical and heat-cauterization may be explained, partly, on the ground that the latter kills the tissues to a greater depth; partly, by the assumed antiseptic properties of the chemical eschar. The explanation of the general immunity of cautery wounds of the cornea from re-infection may possible be found in the absence of blood-vessels and the density of the corneal tissue, in which the lymph channels are especially easily occluded by leucocytes or young connective-tissue cells.

In conclusion I feel like quoting from Trousseau, the words of de Wecker, which have received strong confirmation from a recent article of Knapp's: "It seems to me, that wounded eyes have often contracted migratory ophthalmia, not as the result of the injury, but from the operations practiced upon them." H. G.

HYGIENE AND CARE OF THE EYE.

In olden times, it was said, darkness covered the land and gross darkness the people. It would still seem, judging from the ophthalmic surgeon's stand-point that gross darkness in regard to the ordinary hygiene and care of the eyes still persists.

Among all classes, even the upper, better-educated, there still persists a profound belief in old wives' fables, as to the care and treatment of the eyes, which passes all human understanding and is absolutely incomprehensible and absurd.

This really seems to bear out President Lincoln's statement that most of the people like to be fooled. Yet the fooling in this direction may take on a very serious phase if it result, as it often does, in the loss or obtunding of the invaluable sense of sight.

Time and again, patients come to the specialist complaining of a very sore eye, with a history of the *continuous* applications of poultices of tea leaves, of porridge of linseed, *et al.* They are greatly surprised that under such treatment the delicate organ did not get well, especially as they often say the poultice drew so well and brought such a quantity of matter out of the eye. No question of the deleterious action of this *continued* moist heat, much less of sepsis, enters their minds. Again, patients vigorously deny the application of anything so hurtful as a poultice, but state that they have applied a cold compress and kept it on, the idea of its rapidly becoming warm compress after remaining in contact with the body never enter-

ing their minds. How many eyes have we not seen hopelessly injured by the continuous use of this simple and apparently harmless remedy!

Again, what a number of people, so soon as they find their sight becoming defective, hasten away to an optician, where they are fitted with glasses, the optician at the same time making use of the occasion to berate the oculists, dilating on their absolute unnecessariness and, what is more important, the saving of dollars to the purchaser. In this case the least evil that can happen is the supplying of incorrect glasses, which can be rectified by the oculist when the patient comes to his consulting rooms. Of far graver import is it, however, when instead of being a mere matter of glasses, there is present advancing disease of the fundus oculi, glaucoma, etc. Here the delay in coming to the ophthalmic surgeon often results in serious, permanent deterioration of vision. Not a few such cases have come under my own observations during the past two or three months.

Another evil is the frequent application of eye-patients for treatment to their druggist who more frequently than not makes them up a lotion and ointment which is recommended as being the favorite prescription of some ophthalmic surgeon in the neighborhood. The remedies are used quite regardless of what the indications may be.

Not infrequently, blurred vision, especially if associated with headache, is considered as due to an upset digestion, liver attacks etc., the usual course of purges are taken and continued for some time, until when, finally, the patient appears, there may be found advanced albuminuric retinitis, optic neuritis, glaucoma, painless serous iritis etc. etc.

Examples could be multiplied *ad infinitum* of this "gross darkness," and now the question arises how are we going to dispel it. It is only too true, alas, that the entire lack of knowledge of eye treatment by many general practitioners of medicine may be held accountable for much of the trouble.

Through the ordinary day-schools much might be done. At the training schools for teachers, the socalled normal schools, elementary points could be touched on in the regular course of physiology. This is done in many places but far from generally enough. In turn these teachers when they graduate and are turned out into the world to teach could do much in advising pupils as to the right course to pursue in getting timely professional advice.

The subject of "ophthalmic opticians" who do their own prescribing has already been well thrashed out.

The proper training of the general medical practitioner, the inculcation of a few of the primary points in eye hygiene into school teachers, the dying out of the old school of sick nurses, with their home-made prescriptions for eye diseases, the prevention of counter dispensing by druggists, and the tabooing of the examining opticians will all tend to diminish the evils to which I have referred.

J. W. S.

Drs. J. G. Huizinga, H. W. Woodruff, Wm. A. Mann and Wm. H. Weaver have been elected professors to the Chicago Eye, Ear, Nose and Throat College.

Beginning with the January issue of the RECORD, space will be given to "News Items". Communications of this sort should be sent to Dr. Frank Allport, 92 State St., Chicago, not later than the 20th of each month.

The attention of the readers of, and advertisers in the OPHTHALMIC RECORD, is drawn to the change in the publisher and office of publication.

The following clipping is taken from the *Homœopathic Physician*, September, 1897.

EYE-SIGHT TESTING.—It gives us great pleasure to call the attention of the profession to the picture and advertisement in the present issue. We cordially recommend Mr. ——, the optician, to the profession, as he makes examination and measurement of the eyes for glasses without the use of Atropine. We have had occasion to send him our own patients for several years past with much satisfaction.

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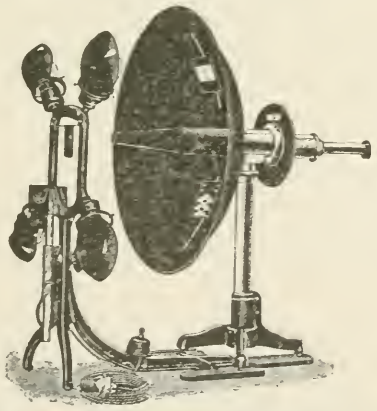

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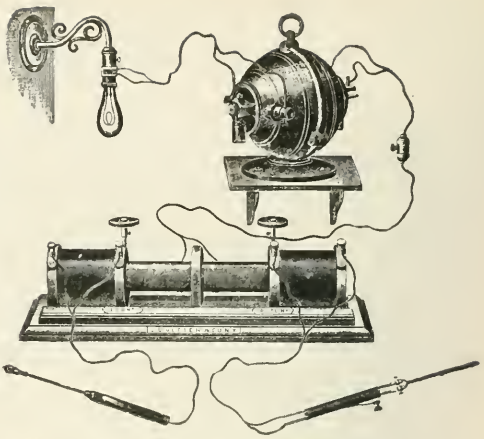

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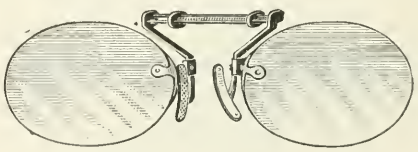

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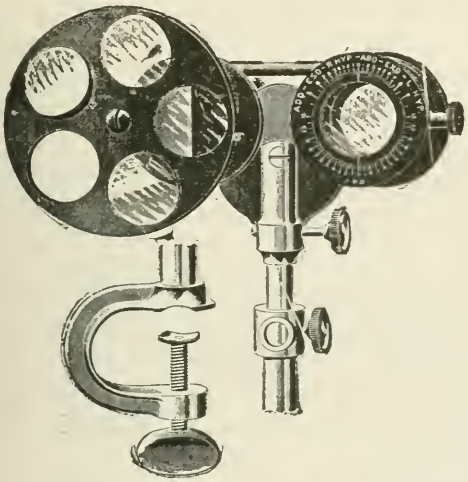

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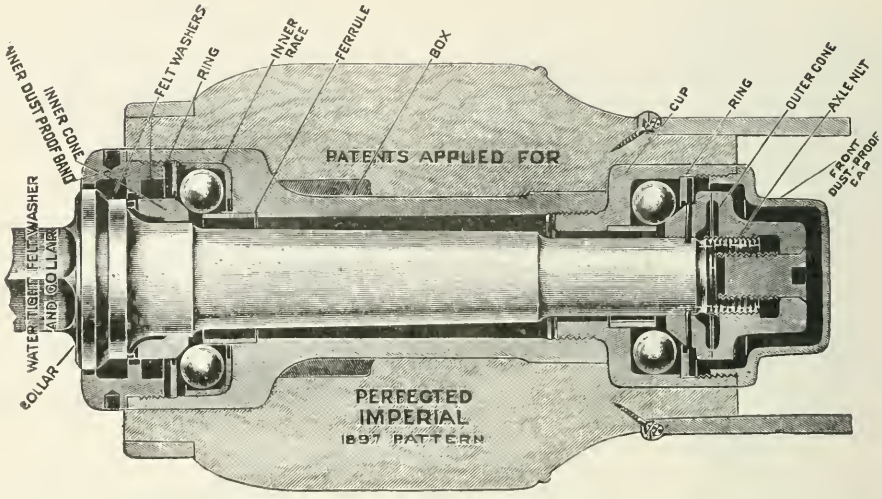

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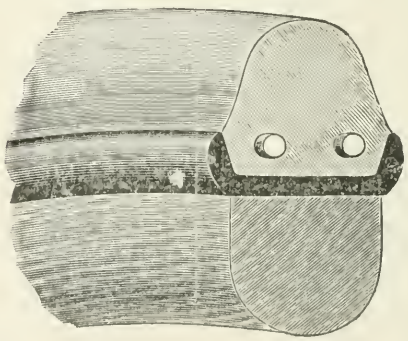

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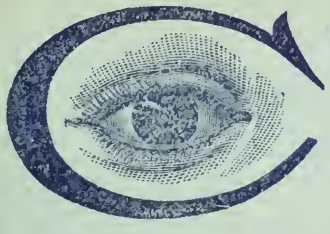

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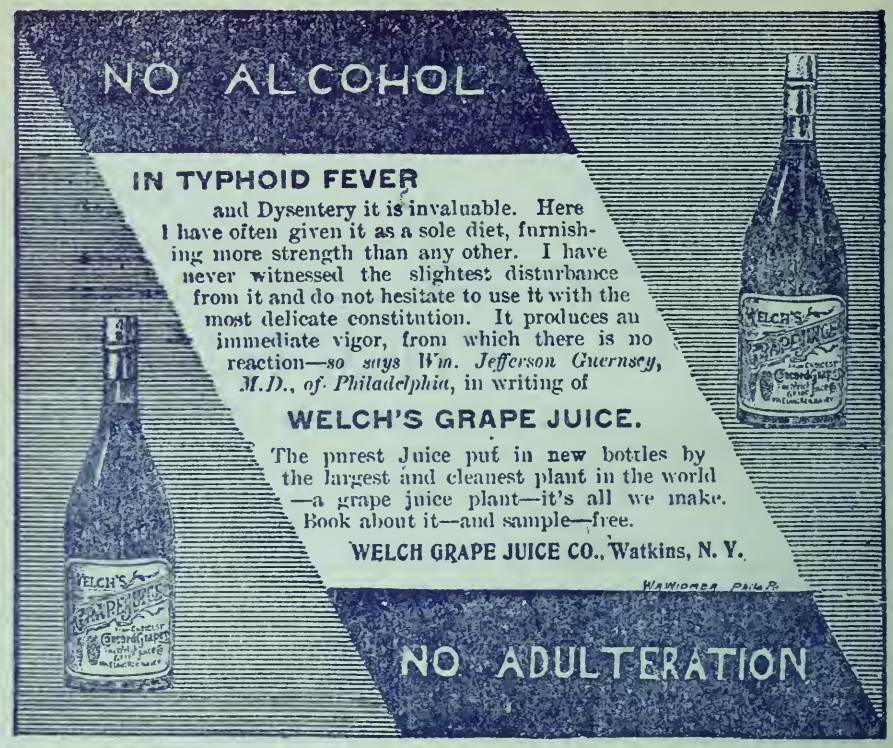
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